SAFETY

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Two Sections — Section One

The **NATIONAL SAFETY COUNCIL**, the heart of the safety movement in America, collects and distributes information about accidents and methods for their prevention. Organized on a nonprofit basis, the Council promotes safety in industry, traffic, school, home and on the farm.

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SAFETY Education

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• • A MAGAZINE FOR TEACHERS AND ADMINISTRATORS

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Safety in College Dormitories

Abstract of a speech presented at the 28th National Safety Congress and Exposition.

by H. W. JAMES

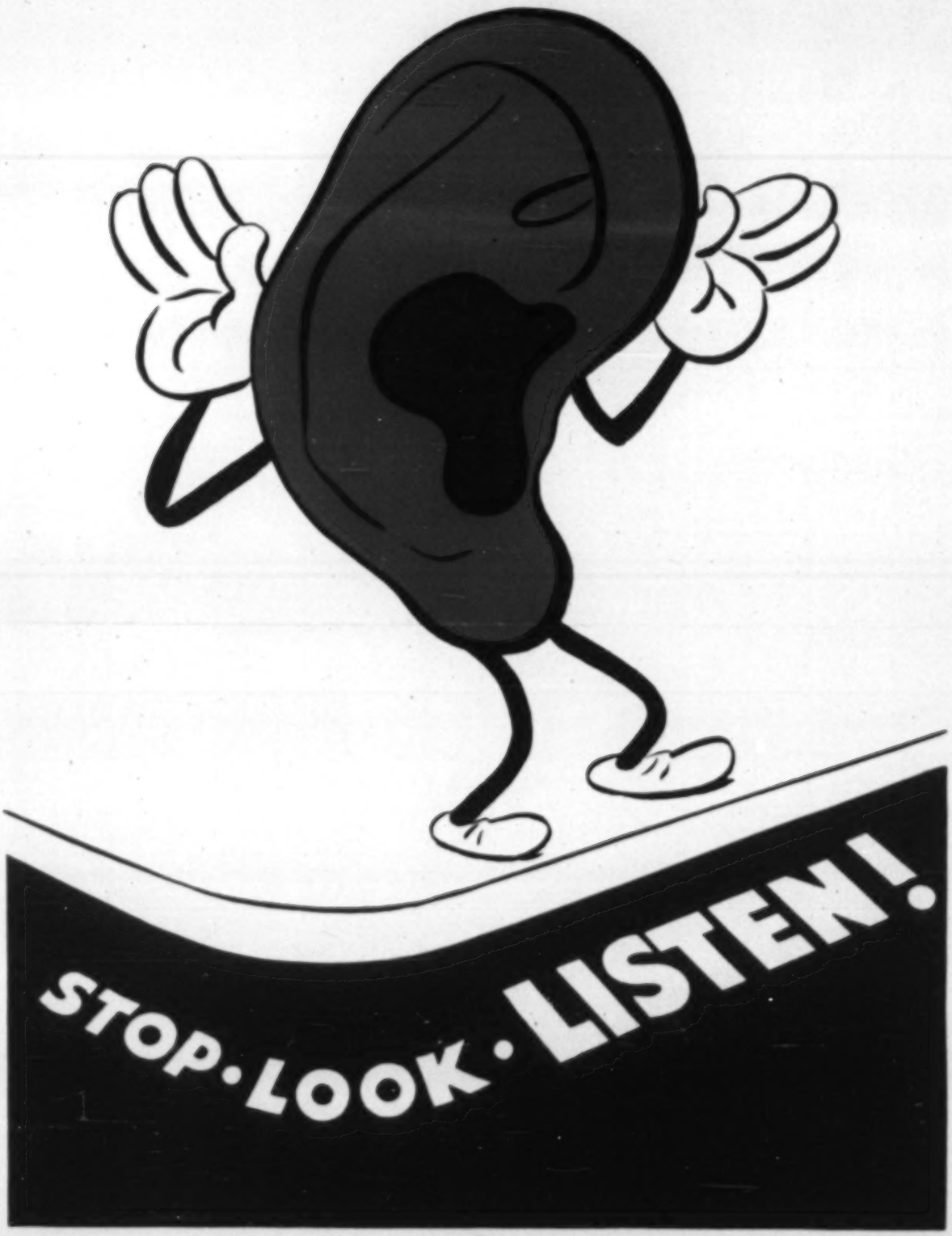
LAST year, the son of a friend of mine was burned to death in a college dormitory. This young man was a senior student with a fine record and excellent prospects. His is only one case of a fatal accident that happened on a college campus. Accidents may happen because of two general causes: (1) inadequate safety precautions of physical conditions; and (2) insufficient precautions on the part of individuals, both college personnel and college students.

MR. JAMES is president of New Mexico Western college, Silver City, New Mexico.

A committee of twenty-nine college representatives, scattered over the country, representing different types of institutions as well as different geographical areas, during this past year, has worked to perfect a check list for college dormitories.

This check list has been used on a trial basis and we now have some results. The primary objective and the most valuable part of the work has been developing this check list; however, the more interesting aspects are the results we obtained when we used the check list on a trial basis. The findings indicate that most accidents are caused by factors that can be remedied without much expense. Most of the violations of safety in college dormitories are those caused by individuals rather than by building construction and safety provisions.

To make dormitory life safer we need more



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KEEP MOVING — BUT SLOW DOWN

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safety awareness on the part of college personnel and college students. We cannot eliminate all accidents because whenever the human element enters in there will always be wrong conduct.

Here are some of our findings.

One hundred seventy-two college dormitories in the United States were inspected by an experienced person using our check list. Of the 53 items on the list, the item with the least number of violations was: "Are all gas burners shut off after use?" There were only two reported violations of this item.

In drawing conclusions from the check list, we shall divide the causes of accidents under three general headings:

A. Unsafe conditions due to the construction or layout of the building itself.

B. Unsafe conditions that may be attributed to college personnel.

C. Unsafe conditions caused by the occupants of the building.

We shall note those items that have been checked as being especially hazardous. One violation may cause the death or injury of a number of people. It is not justifiable to allow any possible cause of an accident to go unheeded. However, we stress items needing special attention, listing those factors where there is need for correction in at least 10 per cent of the dormitories.

Under "Unsafe conditions due to the construction or layout of the building itself," the following items are those that need most attention:

54 of the 172 dormitories reporting need an emergency alarm system in operating condition.

44 of the 172 dormitories do not have their doors opening outward.

35 do not have panic bolts where needed.

31 have not been inspected by fire underwriters.

30 have main circuits that are not large enough wire to carry the electric equipment added by residents.

24 have electric appliances, such as heaters, irons, fans, etc., connected to outlets accessible to persons using gas and water fixtures.

16 do not have wall switches in bathrooms.

There are numerous other high priority items, such as no fire doors on furnace rooms, improper fuses for circuit load, uneven floors and irregular steps.

In the second category, "Unsafe conditions that may be attributed to college personnel," we find it hard to classify certain factors as to responsibility of college personnel or inhabitants. The writer feels that even though hazards caused by lack of proper attention of college personnel rank high, this is undoubtedly due to lack of awareness of need rather than to any intentional neglect. In hazards of this class we find that there are several factors in which more than one half of the dormitories are deficient.

112 of the 172 dormitories do not have evacuation diagrams posted and no alternative plan of escape provided.

99 do not hold fire drills systematically.

97 do not have the names and telephone numbers to be called in case of an emergency posted near the telephone.

In 90 dormitories, fire extinguishers are not demonstrated or explained.

As can be seen, the above group of items all need remedying in at least one half or more of the dormitories. There are other items that need remedying in a significant number of the 172 dormitories.

In 82 of 172 dormitories, students are not regularly advised about safety measures.

48 dormitories do not supply ash trays in adequate number and size.

In 41 dormitories, fuses are not inspected periodically.

33 dormitories need attention in regard to using nonflammable decorations for special events.

36 have furniture that has splinters and weak parts.

In 35 dormitories, oil mops, rags, etc., are stored in containers that are combustible.

24 college officials do not know when the fire extinguishers were recharged.

19 dormitories do not use metal wastepaper baskets.

In 17 cases outside fire escapes are not in safe condition.

Among the items that we classed under the third group, "Unsafe conditions caused by the occupants of the building," we have a few serious hazards.

In 57 cases in survey of the 172 dormitories there is need for regulations against smoking in bed.

In 56 cases students throw cigarettes on the floors.

45 report that there are too many appliances and lamps on one outlet.

31 report they have frayed cords and loose sockets.

21 state that such extension cords are draped over combustible material.

As previously stated, even one violation of a safety measure may cause a serious accident. When items need correction in 10 per cent or more of our domitories, it would seem that the least we can do is to call these conditions needing correction to the attention of college authorities.

The writer feels that the most valuable contribution of this study is the perfection of a safety check list for dormitories. The use of such a list will serve several purposes:

1. It will cause awareness among the administration and college personnel concerning safety measures.
2. If students are allowed to become aware of this checking it will tend to develop a safety consciousness among them. Participation by students in helping to make the check would undoubtedly aid greatly in assisting the development of an awareness of the need of safety precautions.
3. In case an administrator has been using the check list, it will serve as a personal protection against criticism in case of an accident.
4. The use of the plan will show objectively what corrective measures need to be taken.

How often should this check list be used? Each term, or at least once annually.

Following is the check list:

Safety Inspection Check List

Building _____ Date of Inspection _____

By Whom _____

O.K.	Needs Attention	
		Precautions—Falling
		A. Conditions of Permanent Nature:
_____	_____	1. Are there dangerous ramps?
_____	_____	2. Are there hand rails on all stairs?
_____	_____	3. Are all stairways substantial with steps of proper height and width?
_____	_____	4. Are there uneven spots (irregular stairs, raised places, etc.)?
		B. Conditions of Temporary Nature:
_____	_____	1. Are there rugs and carpets with raised edges, torn spots, etc.?
_____	_____	2. Are there loose or slippery rugs?
_____	_____	3. Are there slippery floors or stairs?
_____	_____	4. Are there electric cords and other wires that create tripping hazards?
_____	_____	5. Are hall and stairway lights burning at night?
_____	_____	6. Are dark areas illuminated during the day?
		Precautions—Electrical Hazards
		A. Conditions of Permanent Nature:
_____	_____	1. Have all electrical installations been checked by an electrician before use?
_____	_____	2. Are main circuits of large enough wire to carry additional electric equipment added by residents?
_____	_____	3. Are there any electric heaters, irons, fans, etc., connected to outlets accessible to persons using gas and water fixtures?
_____	_____	4. Are there wall switches in bathrooms?
		B. Conditions of Temporary Nature:
_____	_____	1. Are there proper fuses on circuits?
_____	_____	2. Are fuses inspected periodically?
_____	_____	3. Are there too many appliances and lamps on one outlet?
_____	_____	4. Are there frayed cords and loose sockets?
_____	_____	5. Are there makeshift extension cords draped over combustible material?
_____	_____	6. Are any bare electric lights or hot electric appliances touching combustible material?
		Precautions—Fire
		A. Conditions of Permanent Nature:
_____		1. Date of inspection by fire underwriters.
_____	_____	2. Are proper fire extinguishers in place and easily accessible?
_____	_____	3. Are all fire exits and stairs open and unobstructed?

(Please turn to page 39)

NSC College-University Services

by JOHN E. CORBALLY

Abstract of a speech presented at the 38th National Safety Congress and Exposition.

DURING the 35th National Safety Congress and Exposition in 1947 the Higher Education committee of the National Safety Council set up the Membership Services Evaluation committee for the purpose of considering ways and means of extending the services of the Council to institutions of higher learning. W. G. Johnson, manager of the Membership department, had suggested previously a plan by which the services then available only to industrial members could be made available to colleges and universities. This committee worked with the Membership Services committee during the Congress meeting in October, 1948, and approved in general a new plan for elementary and secondary school membership, and considered a rough draft of a new membership service for colleges and universities.

Since many higher institutions have been including safety in their curriculums, especially in teacher education and in engineering, it was thought desirable to provide some way of making the materials and publications of the National Safety Council more accessible to such institutions. For example, 171 higher institutions in 44 states had courses in safety for teachers listed in the 1950 report of the Higher Education committee, of which Malcolm Price, then head of Iowa State Teachers College, was general chairman. Such departments as education, health and physical education, home economics, and industrial arts have been active in establishing such courses in safety education as general courses for teachers, first aid, playground safety, life saving and water safety, driver education, and home safety—to mention some of the more popular ones.

Yet other areas than teacher education are vitally concerned with the problem of safety, so one of the first items considered by the Membership committee and the Evaluation committee was to list those departments within a college or university which might need safety information services. In addition to teacher education, the following colleges, schools, or departments offer training in which or for which safety materials should be valuable not only for safeguarding student and teacher activities but also for the integration of safety in regular curricula:

College of Engineering
College of Pharmacy
School of Medicine
School of Dentistry
School of Nursing
Department of Physics
Department of Traffic Engineering
Department of Health, Physical Education and Recreation
College of Business Administration
College of Agriculture
School of Art
School of Home Economics
Department of Chemistry
Department of Civil Engineering
University Health Service

One assignment our Evaluation committee completed during meetings of the 36th Congress in October, 1948, was the formulation of a draft for a proposed membership service for colleges and universities. In March of 1949, the members of the committee went over the plan and again revised it in line with suggestions that had been received by the committee members. A final draft was approved later in the year, and in March of 1950, a letter was sent out over the signature of the chairman of the Membership Services Evaluation committee to higher institutions explaining that a plan had now been worked out which would put the material of the National Safety Council at the disposal of colleges and universities. These institutions would be able to get all of the advantages of membership, including the privilege of purchasing material at cost, without the responsibilities. This service was to be the Council's contribution to education.

The letter was accompanied by a sheet on which could be checked a request for information about the services available for teacher education, home economics, engineering,

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ATTITUDES AND EDUCATION

Abstract of a speech presented at the 38th National Safety Congress and Exposition.

by HERBERT J. STACK

SINCE the early days of the driver education movement there has been significant evidence of the importance of good attitudes. Motor vehicle administrators and educators have held that attitudes are more important than either knowledge or driving skills. In research conducted at New York university, faulty attitudes appear to be one of the most common characteristics of the accident repeater. In view of this, there is general agreement that more stress should be placed upon attitude improvement in driver education.

How can driver attitudes be affected by education? If attitudes are so important, every effort should be made to plan activities that will tend to improve them. One can readily see that whatever changes and improvements are to be made will be affected largely through education.

Education is not confined to formal training in elementary and secondary schools and colleges. A far more important job needs to be done with the more than 45,000,000 adult drivers, most of whom have had little training. This group is difficult to reach and to convince, since a large percentage has been driving for many years, has built up bad habits and attitudes that are hard to change, and most adult drivers feel that they are good drivers. In schools we have young people upon whom to stress attitude improvement.

What methods can be used in adult education to improve attitudes?

First, we can spread information. Many bad attitudes have developed from emotionalized misinformation. Drivers are poorly informed about safe driving practices and rules of the road. Research studies have tended to show that accident repeaters are much more poorly informed than the accident free.

All agencies, such as motor vehicle departments, police, safety councils, car manufacturers, insurance companies, and others, should spend more time preparing materials and developing a program to reach drivers to inform them about safe practices, regulations, and rules of the road. We should get away from generalities about safe driving and develop specific informative material.

In addition to this expanded program of education, more should be done in the area of specific training for adults. Although more than a million new drivers pass each year through commercial driving schools, the training they receive is not uniformly good. Some of these schools have adequate standards and do a satisfactory job; others do a sloppy job, being concerned chiefly with getting learners through the state license examination. All of these schools can be improved.

A second approach to the problem involves putting greater stress on attitude improvement materials in the education program. Such materials would include, for example, three recent motion picture films, "Last Date," "And Then There Were Four," and "Fatal Seconds," which are devoted almost entirely to attitudes.

Far more can be done, however, in newspaper releases and in advertising and other

The importance of good attitudes becomes self-evident especially when road conditions are bad. All drivers should know safe driving practices.

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educational media, to stress attitudes — not preaching, or moralizing, but rather weaving into the release subtle references to attitudes. Take as an illustration automobile advertising copy, which at one time tended to feature high-power, speed, and quick getaway. Many of these characteristics are often associated with, and lead to, accidents. How much better it would be to feature safety and reliability —good brakes and visibility, comfortable operation, and reliable performance—in other words, *safe* transportation.

In newspaper releases we need to include more material:

1. Condemning bad attitude, such as recklessness, excessive speed, failure to depress headlight beam in night driving, passing on hills and curves, and the like.

2. Showing the relationship between good citizenship and good driving.

3. Giving facts on the unfortunate results of drinking and driving, so as to convince motorists of the penalty and punishment.

4. Giving facts about suspension and revocation of licenses and the proceedings of traffic courts. This will help show drivers the results of violations and accidents. Fear of losing one's license, and having to pay damages and accident costs, can act as deterrents to some drivers.

5. Encouraging attempts to lower insurance rates for accident-free drivers.

6. Showing that good driving is *smart* driving—and otherwise rewarding and praising those with superior driving records. Most people like to be admired, to be well thought of for their abilities and skills.

If more time were available, much more could be accomplished in high school courses. Studies show that the average time allotment for classroom instruction throughout the country is considerably under the 30 periods recommended, while practice driving averages about 6 periods. Time allotment is only about one per cent of the total time in which youngsters are in high school. Much more could be done if the time allotment were doubled.

First of all, it cannot be assumed that simply being enrolled in driver education courses will automatically improve attitudes. Just as special lessons are designed to improve skills, so lessons should be planned for the purpose of improving attitudes.

Two years ago the Center for Safety Education prepared an 18-page booklet describing certain types of attitude lessons that could be used. Experienced teachers were asked to prepare lessons around such subjects as good sportsmanship, rules and regulations, co-operation, drinking and driving, responsibility and reliability, attention and alertness, and the like. The purpose was to show the teacher how attitude improvement lessons could be incorporated into classroom instruction. More than 8,000 of these booklets have been distributed to high schools and colleges. At all of our teacher institutes and seminars several periods are devoted to methods.

Psychologists have said that attitudes have to be caught rather than *taught*. This cannot be taken literally, for it is possible for the good teacher to set up situations in which good attitudes will be encouraged. We recommend activities, such as visits to police stations, traffic courts, and inspection stations; the use of such outside experts as the police to discuss enforcement problems; the use of motion pictures that feature attitudes, followed by discussions to bring out important points.

Group discussion led by influential students is also helpful. Activities built around student government and school clubs, which tend to develop a sense of responsibility for the welfare of others, also help. School assemblies encouraging attitudes are useful, for they reach the entire student body.

While attitudes cannot be taught like rules and regulations, it is desirable that time be spent through class discussion in identifying good attitudes, at the same time pointing out the serious effects of bad attitudes. These should be suggested by students, and an effort made to get the group to agree to support the good attitude side of the ledger. The sentiment of the group reinforced by the agreement of the teacher will help.

Teachers must remember that attitudes are tied up to the emotions. In a sense attitudes might be termed "emotionalized knowledge," since a feeling of loyalty to one's school, to one's family, or to one's religion, as well as to the group or gang, can be a strong influence in improving attitudes. Let us consider a typical example: in a course in driver education, two periods have been devoted to discussion of the effects of alcohol upon the driver. The students have learned some of the effects upon reaction time, vision, and the like. They are informed about state regulations. They are aware of the terrible accidents that result from alcohol and the punishment meted out to offenders. During the

week four of the youngsters go for a ride to a neighborhood tavern. Three order soft drinks, but the fourth, who happens to be the driver, starts drinking cocktails. Each youngster is aware of the danger. Now here is where attitudes come into play: if the three have sufficient loyalty to their parents, their teacher, or their church—in other words, if emotional ties are strong—they will heed the admonitions given them and endeavor to persuade the fourth to desist.

And the school can give guidance to young people on what to do or say in such a situation. This can be done through classroom discussion of the ways of handling this emergency. For it *is* an emergency situation, and is something that is occurring night after night in our roadside taverns, at our country clubs, and in other places where young people congregate. Loyalty to family, school, or church; fear of possible consequences; or respect for law, can influence young people's attitudes in such situations.

How useful can lessons of this type be? A year ago we secured the co-operation of 40 high schools in various states in carrying on a simple research study. Copies of the Siebrecht Attitude scale were sent to each school. The scale was administered at the beginning of the course. We followed the procedure of not having students give their names. The teacher was asked to stress attitude improvement during the course along the lines suggested in the Center's booklet. At the end of the course the scale was again administered. Mean scores showed a 15 per cent improvement, although there were a number of cases in which the students showed a loss rather than a gain. There are various explanations for this which we cannot list at this time.

There is evidence that driver education tends to improve attitudes. Incidentally, we carried on a similar study to measure increases in knowledge and information. As would be expected there was a significant gain—greater than in attitudes.

Thus far we have stressed attitude improvement in the classroom part of the course. Let us consider some methods of practice driving.

The Instructor. He should be an experienced driver, patient, courteous, and kindly, yet insisting on only the best practices. He should speak in a quiet, confident voice, not get excited, and be friendly with all the students. He should be an expert in all the skills, and insist upon no exceptions. It is especially important that he be well liked by students. They will follow his suggestions partly because he is their teacher, and partly because they like him.

Methods of Teaching. Driving to and from the practice area gives an opportunity for the teacher to discuss good attitudes emphasizing hand signals, keeping in proper lane, being

We need to condemn bad attitudes, such as recklessness, excessive speed, passing on hills and curves.

courteous to pedestrians and other motorists. The return trip gives an opportunity for criticism of the lesson.

In the four-in-a-car plan there is danger of wasted time, unless the instructor maintains the attention and interest of students in the back seat. Since this plan requires 24 periods in the car—almost as much as the total time allotted to the classroom instruction—it should not be wasted. The following are suggestions for attitude lessons to accompany skill lessons:

1. Whenever possible, practice driving should be given by the same instructor who gives classroom instruction. It becomes the proving ground for the classroom lessons.

2. The instructor should speak in a quiet voice, calling attention to good or bad practices of the driver or other motorists.

3. The instructor should take advantage of situations as they arise to stress proper attitudes.

4. He should voice his dislike or disapproval of typical bad attitudes—the "cowboy," the "bumper chaser," and the like.

5. He should insist that all maneuvers be carried out precisely as directed.

6. He should point out how other drivers are upset, annoyed, and frustrated by bad driving practices.

7. He should study the personal characteristics of each of his learners; teaching needs to be adjusted to the individual.

8. He should encourage a feeling of pride and satisfaction as skills are developed.

9. He should give complete instructions and encourage youngsters to look ahead to size up situations.

10. He should maintain a friendly attitude toward enforcement officers. Students will note his friendly gestures and the cordial greetings from traffic officers.

11. Courtesy begins at home. The instructor must remember that one of the most important motivations for good attitudes is the regard that each student seeks in the way of admiration and recognition from his fellow students.

12. The instructor should remember that the emotions are closely tied up with attitudes. The instructor can utilize this influence by pointing out to the youngsters that he is very sure that their parents will want to have them drive in a skillful and safe way.

The teacher needs to be on the alert for situations and opportunities where he can direct the thinking of the youngsters toward attitudes—integrating attitude lessons with the classroom instruction and practice driving.

Driver education is a part of training for good citizenship. The kinds of attitudes that make for good citizenship also make for good driving.

Attitudes of drivers and pedestrians should be improved: both need to be alert to the danger of darkness.

Lower Elementary Accident Summary

by JENNIE SPADAFORA

AMONG children in the lower elementary grades — kindergarten through third — accidents occurred more frequently in May than any other month during the school year 1949-1950. According to reports received by the National Safety Council, the May rate for these children was 12.32, compared to the average rate for the school year of 9.76. In September the rate was almost as high as in May, and in October it reached 11.25. During December, January and February, in contrast, the rate averaged only 8.

The school jurisdiction accident rate for these pupils was higher than the nonschool accident rate in each month from September through March. However, in April and May the nonschool rate far surpassed the school jurisdiction rate.

The accompanying table shows the seasonal variation of accidents at the different locations for kindergarten through the third grade. The all-grade rate for all accidents is also given, to show the similarity of the seasonal trend in the accident experience of the lower elementary grades and that of all pupils.

School building accidents of these children were confined largely to classrooms and auditoriums. October and May, with frequency rates of 0.82 and 0.80, respectively, were especially noteworthy. The rates in other months ranged from 0.51 to 0.69.

Injuries in unorganized activities accounted for more than half of the school ground accidents in each month of the school year. Accidents occurring on school ground apparatus —swings, slides, teeters, bars—were moderately frequent in September and October, but were infrequent in the cold weather months.

Motor-vehicle accidents on the way to school occurred most frequently in September and April, and were relatively infrequent in other months. Rates ranged from 0.26 to 0.42.

Home falls, particularly important for children below the fourth grade, retained their high frequency throughout most of the school year. The average rate was 1.09, but monthly rates fluctuated from 0.58 in December to 1.58 in April. Burns had an average rate of 0.24, but reached 0.36 in March. Cuts and scratches of these children occurred fairly frequently in every month, but there was a wide seasonal swing. The September rate of 0.94 and the May rate of 0.91 were the highest. In January the rate was only 0.38 and in February 0.31.

Motor-vehicle accidents not on the way to school showed little fluctuation from September through March, but rose considerably in April and May, reaching a rate of 0.91.

The monthly rates from September through March for street and sidewalk accidents were about equal to or below the average rate of 0.46. However, the rates for April and May were much higher—0.70 in May and 0.81 in April.

MISS SPADAFORA is a member of the statistical division, National Safety Council.

Student Accident Rates per 100,000 Student-Days

September, 1949 to May, 1950

Classification	Year	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May
Kgn.—3rd Grade										
Total Accidents	9.76	11.92	11.25	9.29	7.85	8.07	7.95	8.87	10.52	12.32
School Building	1.60	1.60	1.79	1.47	1.50	1.59	1.49	1.82	1.60	1.48
School Grounds	2.68	3.85	3.45	3.15	2.55	2.13	1.97	2.04	2.37	2.79
Going to or from school	.86	.85	.89	.75	.82	.84	.95	.98	.92	.71
Home	2.53	3.33	2.77	2.28	1.70	1.82	2.31	2.14	2.84	3.70
Other	2.09	2.29	2.35	1.64	1.28	1.69	1.23	1.89	2.79	3.64
All Grades										
Total Accidents	13.03	14.35	15.55	13.29	11.34	11.16	11.71	11.83	14.06	14.60

Florida Shifts

by DONALD LOURS

THE high schools of Florida are gradually accepting the recommendation of the President's Highway Safety Conference of May, 1946, which was "that secondary schools provide driver education and training as an integral part of the curriculum for students approaching legal driving age, and other traffic safety activities for all age levels in the secondary school." This is the expected course of action under the assumption that one of the purposes of public school education is to prepare the youths of this nation to assume the responsibilities of adult living. Most young people will drive cars eventually. How well and with what attitudes they drive depend upon the quality and the amount of instruction they receive. Society, through the medium of its school system, must not fail to provide and support a program of driver education if it is to alter the shocking statistical picture presented by our automobile accident rate.

In any movement it is usually interesting and worth while to pause frequently and trace its growth and development. As in the case of other educational movements, driver education had few precedents to serve as guiding rules of action. In July, 1947, one year after the conference, there were no public schools in Florida offering driver education classes. Few, if any, teachers were prepared to teach driver education. No teacher-training institutions were giving courses in driver education. There were no certification requirements for teachers of driver education, no state-provided guides for study, and no state-adopted textbooks for driver education.

Since the key to a successful teaching program is a qualified teacher, it was evident to the educational leaders of this state that the preparation of driver education personnel was the most immediate need which had to be met. With this in mind, the first of five short courses designed to equip a few teachers with the skills necessary for teaching driver education was organized and held at the University of Miami, July, 1947. This course and the ones which followed were considered emergency measures necessary to supply the immediate demand for trained instructors. Approximately 40 persons attended this first short course which consisted of a 40-hour program extending over a period of 5 days. There followed in order three more short courses, attended by approximately 30 white teachers.

Realizing that the Negro youth, too, will drive the highways of this state, Florida educators, both white and Negro, who were particularly interested in this program of driving instruction in the public schools, planned and carried out a seminar in driver education for Negro teachers. This short course held at Bethune-Cookman college, Daytona Beach, November, 1949, provided the state with 30 trained Negro teachers of high school driver education.

Certain of these courses, curricular expediencies at best, were the forerunners of the present university courses in driver education which are offered by Florida State university, University of Miami, University of Florida, Bethune-Cookman college, and the Florida Agricultural and Mechanical college.

In answer to a demand by teaching personnel in and around Marianna, the Florida State university has offered a driver education course by extension during the Winter quarter, 1950, to 15 interested teachers and principals. As an outgrowth of this course, several high schools in that vicinity are formulating plans for beginning driver education.

Further progress has been made through the setting up of certification requirements and through the adoption of a textbook for high school usage. In addition to being certified to teach, instructors must have either completed a college course or a short course in driver education. These requirements will be increased in 1954, at which time the driver education instructor must have completed:

1. Two semester hours driver education.
2. Two semester hours safety education.
3. A course in first aid.

The Florida School Safety Advisory council has been organized and has given considerable attention to the problem of driver education in the public schools. Plans have been

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MR. LOURS is assistant professor, department of physical education for men, Florida State university, Tallahassee, Fla.

Into High

by FRANK W. PISANI

SOUPED-UP jalopies; smart, sleek sport cars; or often the family automobile, become grim deathtraps in the hands of thrill-mad teen-agers, bent on getting their "kicks" by seeing how fast they can send tons of steel hurtling down the nation's streets and highways.

To be sure not all of this country's accident toll can be attributed to its youths, but the percentage of total accidents in which teen-age drivers are involved is alarmingly high. Thus, to the person who advocates education as a solution to this problem, there seems to be only one logical place to begin—school.

While in-service training for teachers has been emphasized, the two state universities have added courses to their curriculums designed to train prospective teachers in this phase of safety education.

Working with the state universities in this program is the Florida School Safety Advisory council, which was set up in 1947 by the state supervisor of public instruction. This body determines the instructional standards that each public school must meet in the field of driver education and general safety.

As to the course itself—an intensive 40 hours of training is given the teachers. The latest in methods and equipment is used. Included in the equipment is a dual-controlled car used for driving lessons. Florida's teachers are taught to teach good driving habits. Good driving can be made just as attractive as the reckless antics of the hot-rod teen-ager, if the young men and women are instructed in modern interesting ways.

This year the program included a class in the field at Marianna, Florida. Here county teachers were on hand for a weekly session. No distinction was made between those teachers who are to do the actual work with the "drivers of tomorrow" and those who are not engaged in driver education. The purpose was to give all teachers an idea of the program and its importance.

Florida does not pretend to have found the *one* solution. To carry it a step further they do not pretend to have found all *of a* solution.

But the job does not end with the instruction of teachers. They must be given assistance in setting up the local school program.

MR. PISANI is field representative, general extension division, University of Florida, Gainesville, Fla.

Souped-up jalopies can become deathtraps in the hands of thrill-mad youths racing down highways.

Above—The hot-rod enthusiast who breaks the traffic law is a menace to society. He is courting death for himself and for others on the highways.

Below—One answer to the "hop-up" problem is in driver education programs in all high schools.

EVERYBODY OUT!

by JOHN A. BUTLER

Typical hallway signs used at Dunwoody Institute.

EVERYBODY out—two minutes or less is the goal!

Dunwoody institute has a full-time day school attendance of 1,500 young men in training in 29 trade and industrial occupations and fields. The instructional, office and service staff numbers 150.

Once each month, or oftener, on an irregular schedule without prior notice, the entire body of students and employees evacuates the building in a practice fire drill *in less than two minutes.*

At the sound of the fire-alarm signal all sections of students are directed from classrooms and shops by their instructors according to posted and prescribed routes. All rooms and shops have white on red signs above doors giving directions which way to go and which stairways and exits to use in leaving the area and the building.

Stairways are plainly designated with easily read white on red signs, giving the stairway identification letter A, B, etc. Letters are assigned from front to rear of the building. Continuity and directions through hallways and interhallway doors are evident from additional markers.

All exits from the building are also identified by the standard white on red sign above or at the side of the exit doorway.

This plan of identifying all stairways and exits together with posting every classroom, shop, office and other areas of the building with standard and alternate directions for evacuation was developed by a fire evacuation committee consisting of instructors, department heads, building engineers and school officials. Representatives from the bureau of fire prevention of the Minneapolis Fire department provided consultation service in the development of the program.

This same program has been found equally effective with adult groups attending evening school.

Members of the fire evacuation committee meet promptly following each fire drill to review conditions and incidents occurring during the drill so that faults and problems

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MR. BUTLER is assistant director of Dunwoody Institute, Minneapolis, Minnesota.

School Fire Safety

by T. ALFRED FLEMING

Abstract of a speech presented at the 38th National Safety Congress and Exposition.

THE majority of school fires have their origin in basements, usually in storage areas or near heating, ventilating or air-conditioning systems. In the first five minutes after a fire starts, and frequently before any alarm has been given, superheated air has been forming that reaches temperatures of 300 to 500 degrees. This hot air coming directly from the center of the fire rises immediately to the highest point in the building, carrying with it smoke, carbon monoxide, and other toxic gases. This hot air spreads throughout the halls and stairways, involving the entire interior of the school within a few minutes. Air heated to 300 to 500 degrees greatly endangers life; breathing such air sears the lungs. A school with open stairways and hallways constitutes a very real fire hazard.

As the fire proceeds for possibly 10 minutes, temperatures of superheated air reach from 800 to 1100 degrees and, as the temperature increases, the heated air rises more rapidly and concentrates in the upper areas. In the presence of hot air of these temperatures, combustible materials will ignite spontaneously and suddenly the entire structure becomes a raging inferno, frequently before children can be rescued.

Children should have an enclosed method of escape from every floor in the building without passing through dangerous areas.

But we have good fire escapes on the outside of the school! Yes, we may have, but sometimes the ordinary stair fire escape is not adequate.

Fire burning in the lower areas, while it is giving off superheated air throughout the building, is reaching out for more oxygen to support combustion. Flames belch out of basement windows. These are frequently of ordinary glass which breaks immediately, and the flames reach out for air. There are usually from two to three windows of this type under each fire escape. Very often the flames involve the lower part of the fire escapes before children have a chance to escape. Wire glass set in metal frames might have saved lives because this type of window will retard fire for at least 50 minutes. In addition to the windows under the escapes, *all* windows within 10 feet of the fire escape should have wire glass for added protection.

A careful survey of school building conditions should be made frequently.

Heating facilities, including fuel storage, should be segregated from the rest of the building.

There should be automatic sprinkler systems and an automatic fire-alarm system connected directly to fire headquarters.

Extensive hall areas with open stairways cannot be firesafe. Once fire has started, these horizontal and vertical openings rapidly conduct superheated air, smoke and gases throughout the building. The remedy is to enclose open stairways and partition hall spaces by means of fireproof partitions and fire doors. It is fundamental that each floor be provided with at least two means of protected exit leading directly to the outside. Smoke and fireproof stair towers for everyday service are recommended for all upper areas. All doors should open in the direction of travel, and all exit doors should be protected with an approved type of panic bolt release, which is checked daily by the custodian. Exit lights should be maintained over each emergency opening.

The school building heating plant is possibly the greatest special hazard. To improve conditions, the boiler or furnace room should be enclosed by partitions and ceiling of not less than one-hour fire resistance (Underwriters' Laboratory listing). Entrance should be possible only from the outside, but where this is not possible or feasible the partition openings should be protected by approved fire doors.

The cafeteria, chemical laboratories, manual training and domestic science rooms, and the assembly hall present additional fire hazards. They should be located on the ground or basement floors, with direct exit to the

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MR. FLEMING is the retired head of the Conservation department of the National Board of Fire Underwriters, New York, N. Y.

Rochester Safety Patrol Panel

by EDWIN S. SMITH

THE cost of living was high in Rochester, New York, last winter, just as it was everywhere else, but when snowballs went to five cents each, a lot of school children decided it was time to call a halt. That five-cent price tag was put there as a "fine" by members of the safety patrol at Public School Number 24 in a determined drive to stop forbidden snowballing. The system worked, too. Immediately the number of "fines" dropped, and both teachers and parents breathed a sigh of relief.

In Rochester, the success of the new snowball elimination plan did not go unheralded, however. Soon, several other schools were following the same course of action, all because the school officials, police safety officers and the safety council worked out a new plan to give boys and girls who are safety patrol leaders a chance to discuss solutions to their own problems with patrol leaders from the other 113 city and rural elementary schools.

For years the Rochester Safety Council, sponsor of the school safety patrols, has been entertaining 200 elementary school safety patrol leaders at an annual safety rally. These followed the usual pattern of such affairs with most of the talking done by adults. "Why not let the safety patrol captains run their own show," someone suggested. "Let them exchange ideas on how they solved safety problems. Maybe some new ideas will result!"

Last winter the new plan was given its first full-dress trial. Instead of the adult leaders doing the talking, the program was run by the patrol captains of the public and parochial schools. The chairman of the meeting was flanked on the platform by a dozen other captains — both boys and girls — who did everything from introducing guests to discussing how to handle parents who refuse to obey the patrol members' orders.

Problems were varied. One school had trouble with rowdyism at bus stops near the school. Station patrol member at stops to see that rowdyism is stopped was the solution.

A parochial school reported that patrol members could not secure observance of safety regulations by school children of another school who passed by every day. Go to the principal of the other school and talk the matter over was the answer from the floor of the meeting.

Another school reported that children were sometimes offered rides by passers-by. "Don't get scared if a stranger asks you to ride with him," a patrol member said. "Just refuse politely and then take down his license number and report the incident to your parents as soon as you get home."

What can be done when parked cars near school crosswalks obstruct children's view of traffic? That's sometimes a problem even for adults. These boys and girls decided that the best thing to do was to try to find the owner, have the school officials warn him once, then turn repeaters over to the police.

For more than an hour questions and answers flew back and forth in the meeting room. Boys and girls made notes for future reference. When the meeting was over, adults who had held their breath at the thought of what might happen when the children were given free rein decided that henceforth this was the only system.

Of course, the meeting took planning. The panel participants were carefully selected and questions were discussed in an advance session. Yet this was no "canned" program. Boys and girls formulated questions based on problems in their own schools, and answers were given as panel members and audience reasoned them out. When the panel had finished discussing a problem, the chairman asked for opinions from the floor. These came thick and fast, not always in agreement with the panel. But out of it came the feeling on the part of teachers and pupils alike that this free expression had given patrol leaders a new grasp of their problems.

P.S. How *do* you handle parents who will not obey the safety patrol member's directions? That one was easy. Let him go his way, but explain to the other children who may see his disregard of safety rules that probably the parent wasn't taught to be safe when he was in school!

MR. SMITH is director of the Rochester (N. Y.) Safety Council.

safety education data sheet–

No. 50

Safety in the General Metals Shop

STATISTICS

1. There are no national statistics available on the number of accidents or injuries sustained in school general metals shops. However, various studies have been made which give some insight into the situation. One such study in 300 high school shops in 10 states in the Middle West revealed the following:

Of 766 accidents occurring during a single school year, hand tools were responsible for 66 per cent—power driven machinery 23 per cent. Thirty-three accidents were reported that caused loss of some part of body.

THE PROBLEM

2. From the above figures it can readily be seen that every school having a general metals shop (or any other shop) should also have a safety program to train students not only to observe safety rules but to know *why* they must do so. Therefore, the program should definitely include rules which students themselves help formulate.

GENERAL SAFETY PRECAUTIONS

3. Be sure that all machines have effective and properly working guards that are always in place when machines are operating. Replace guards immediately after any repairs.

4. Do not attempt to oil, clean, adjust or repair *any* machine while it is running. Stop the machine and lock the power switch in the "off" position.

5. Do not operate any machine unless authorized to do so, or under supervision of instructor.

6. Even after the power is off, do not leave machines until they have stopped running. Someone else may not notice that they are still in motion and be injured. This applies particularly to grinding wheels and circular saws. And do not try to stop with hands or body *any part* of *any* moving machine.

7. Always see that work and cutting tool on any machine is clamped securely before starting.

8. Keep floor clear of metal chips or curls and waste pieces. Put them in container provided for each machine. Scraps are tripping hazards, and chips or curls may cut through a shoe and injure the foot.

9. Do not operate machinery when instructor is not in room.

10. All set screws should be of flush or recessed type. If they are not, move with caution when near them. Projecting set screws are very dangerous since they may catch on sleeves or clothing.

11. Get help for handling long or heavy pieces of material. Follow safe lifting practices—lift with leg muscles, not the back. If you do not know how to lift safely, ask instructor to show you.

12. When working with another student, only one should operate machine or switches.

13. Do not lean on or against machines.

14. Handle sheet metal with care; do not slide through the hands. The edges may be sharp and cause cuts.

15. If certain areas are restricted by floor markings, observe restrictions set up by such zones.

16. Do not run in the shop; and there should be no horseplay in the shop at any time.

17. Concentrate on the work and do not talk unnecessarily while operating machines. Don't talk to others when they are operating.

18. Get first aid immediately for *any* injury.

19. Be sure you have sufficient light to see clearly. Check with instructor if you do not have enough.

CLOTHING AND EQUIPMENT

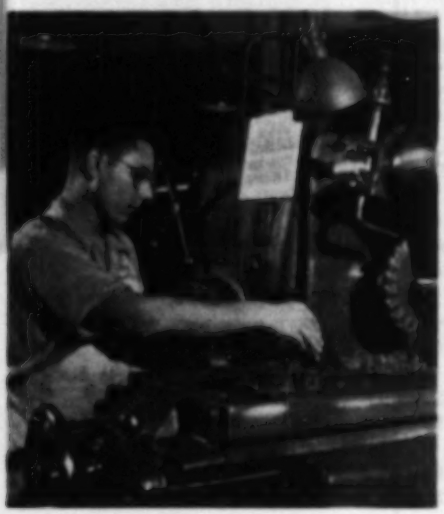
20. *Always* wear safety glasses, goggles or face shields designed for the type of work when operating *any* machinery, or while welding, soldering, etc.

21. Wear clothing suited for the job. Wear shoes with thick soles—safety shoes if heavy work is being done. Do not wear rings, wrist watches, bracelets or other jewelry that could get caught in moving machinery. Do not wear neckties or loose or torn clothing of any kind. *Do* wear shirts or jumpers with sleeves cut off or rolled above the elbows. However, in such operations as welding, handling hot or molten metals or acids, sleeves should cover arms and wrists.

22. Always *remove gloves* before turning on or operating *any* machine. If material is rough or sharp and gloves must be worn, place or handle material with machine turned off.

23. When gloves are needed, wear canvas or reinforced gloves for heavy, rough work. Leather gloves or hand pads are better than canvas for handling sheet metal, castings and sharp scrap. Use hand pads or asbestos gloves for hot material.

24. Rubber gloves are a *must* for handling corrosive chemicals.



Keep hands away from work when machine is running. Use brush, not hands, to remove chips.

ELECTRICITY

25. All switches for machines must be located where operator can reach them quickly and without leaving his work.

26. Familiarize yourself with location of all switches, especially emergency switches.

27. Buttons and switches must be of type which cannot be accidentally closed and thus start any machinery. Recessed "stop" and "start" buttons are a good safety feature.

28. Do not overload any machine. Check with instructor if you don't know its capacity.

29. *Be sure all portable electric tools are grounded;* do not use them unless a ground-wire is provided. Be sure cords are free of kinks and not dragged over hot or rough surfaces or through chemicals; and keep cords free of grease and oil. Do not trail cords across aisles or hang them low between machines. They are tripping hazards. Check all electric cords occasionally to see that they are in good repair.

30. Before using fixed machines run by electric motors, be sure frame is grounded.

FIRE PRECAUTIONS

31. Learn location of fire extinguishers and how to use them.

32. Store flammable liquids in safety-type containers. And store paints, lacquers and thinners in a metal cabinet and not near open flame. Keep only limited supply of these materials in shop—enough for active use.

33. Be sure to put all oily rags or waste or paint rags in metal containers with tight covers.

HOUSEKEEPING

34. Keep floor free of oil, grease, or any other liquids. Clean up spilled liquids immediately; they are slipping hazards.

35. Aisles should be clear at all times to avoid tripping or other injuries.

36. Store materials in such a way that they cannot become tripping hazards.

37. Do not leave tools or work on the table of a machine even if machine is not in motion. Tools or work may fall off and cause toe or foot injuries. Put tools or work away when not in use.

38. Put all scrap in scrap boxes placed adjacent to each machine.

EQUIPMENT

Hand Tools

39. Safe use of hand tools is covered in Safety Education Data Sheet No. 15—Hand Tools. However, a few general rules are repeated here.

a. Select the right tool for the job and make sure it is the right *size* for the job. Don't use makeshifts; they are dangerous.
b. Be sure tools are sharp and in good working condition before using them. Dull tools frequently necessitate the use of additional force, causing accidents.
c. Wipe hands and tools clean before use.
d. When carrying tools with cutting edges or sharp points, carry them with edges or points facing down. Do not carry pointed or sharp tools in pockets.
e. Carry only the number of tools which can be managed safely.
f. Hand tools to fellow worker handle first; never toss them.
g. Clean tools before putting them away and store them so they cannot fall, causing injuries, and so they do not become damaged while not in use. Damaged tools are not safe tools.

Shapers

40. Be sure ram, tool head, tool, work, table support clamping screws and vise are properly secured in place or position and that tool head and tool clear the work before starting shaper. Place a metal shield or heavy, close mesh wire screen, over the tool to catch the chips.

41. After setting stroke length and position, check to see that adjusting nuts are tight.

42. Remove all wrenches from machine after completing set up. If magnetic chuck is used be sure current is on before starting machine.

43. Stand parallel to direction of stroke of machine when it is operating and never reach across table between strokes of the ram nor remove chips while ram is in motion.

Planers

44. After work is fastened, check to see that it clears cross rail; see that stop pegs are in proper places and safety dogs are secured in position. See that feed rod and its attachment are properly located and in proper working order.

45. Have planer idle when adjusting length of "bed" stroke and adjust length of stroke and speed of machine to suit work.

46. Do not reach over a moving job and never ride the "bed."

47. Leaving tools of any kind between the ways is extremely hazardous.

48. When loosening tool holders, hold tool with one hand or place a wooden support under it.

Milling Machines

49. Make sure that cutter and arbor are secure and that cutter and arbor support will clear work. Use only cutters that are correctly ground and in good condition.

50. To avoid striking hands on cutter while setting up, move table with work as far away from cutter as possible.

51. When using cutters in a vertical milling machine, do not take an excessively heavy cut or feed. Such a feed or cut could break cutter and injure operator.

52. Do not attempt either to tighten or to take off arbor nut by applying power to machine. Make sure motor is stopped to prevent machine starting up accidentally.

53. Check speeds and feeds, and feed work against direction in which cutter is rotating. Otherwise, cutter may climb work and injure operator. Reduce speeds 50 per cent for cast iron.

Never attempt to hold the work under the drill by hand; clamp securely to table before starting up.

54. Keep hands away from work when machine is running. Never reach over a revolving cutter, especially the side of cutter which cuts into work; and use a suitable brush if chips are to be removed from work.

Drill Presses

55. Use drills properly sharpened to cut to the right size and see that drill is running true. Small drills should revolve at high speed—large drills at low speed. Reduce speeds 50 per cent for drilling cast iron. Drills should be carefully selected as to suitability for the job and good condition. Chuck wrenches must be removed from the drill chuck before starting machine.

56. Never attempt to hold work under drill by hand; clamp it securely to table before starting machine.

57. Run drill only at proper speed; forcing or feeding too fast may result in broken or splintered drills and serious injuries. Change belt for speed regulation only when power is off and machine has come to a complete stop.

58. If work should slip from clamp, never attempt to stop it with hands. Stop machine and make any adjustment or repair. If drill sticks in work, shut off motor and start drill by hand.

59. File or scrape all burrs from drilled holes.

When putting on or removing a chuck or faceplate, use hand power only—not power that operates lathe.

60. Do not reach around or in back of revolving drill.

61. Keep your head back and well away from *any* moving part of the press.

Metal Lathes

62. Before turning on power, check to see that tailstock, tool holder and job are properly clamped. If magnetic chuck is used, be sure current is on before starting machine.

63. Use hand power only, when putting on or removing chuck or faceplate. Do not use the power that operates the lathe. When assembling or removing chuck, place board on ways to prevent damage to machine in case chuck falls. Have firm grip on chuck as it nears end of thread.

64. Do not leave chuck wrench, or any other tool, in the chuck. If machine is turned on, wrench may fly out and injure operator or some other person.

65. Do not use a wrench on revolving work or parts, and never try to measure work or feel the edge, or adjust, a cutting tool when lathe is running.

66. Do not take *very* heavy cut. Doing so may cause job to fly out of machine.

67. When filing, be sure tang of file is protected by a sturdy wooden handle, in good condition. Stand to one side so that if file is forced upward it will go past the body rather than against it.

68. Do not shift or change gears while lathe is running.

69. Stand erect—this keeps head away from flying chips.

Metal Saws

70. When turning on power, stand to one side of saw frame, then adjust speed to suit work.

71. When saw is operating, do not bend over it.

72. Mount work *only* when saw is stopped.

73. Support protruding end of long work so material cut off will not fall and possibly cause injury, and be sure that others cannot run into protruding end.

74. When using the sliding stock guide, do not allow fingers to project beyond the end so that they could come in contact with the saw.

75. Be sure that blades for both circular and band saws are in good condition. An

indication that the blade is cracked is a sharp, regular clicking noise, as the work is fed. Change blade at once if this condition arises.

76. Test circular saws by "ringing," and band saws by passing blade through the fingers. Give both types careful visual inspection. If blade *does* break in work, shut off power and do not attempt to disengage blade from work until machine has come to complete stop. To prevent hand injuries, use a supporting block when cutting short pieces.

Grinders

77. Stand to one side out of line of wheel when starting it up, especially if wheel is new.

78. Let wheel warm up before using it heavily; work should be fed gradually. Using too much pressure or striking wheel suddenly may cause it to break.

79. Make sure tool rest is only ⅛ of an inch from wheel. Check clearance before using. Too much clearance may cause job to jam wheel and break it. Do not set tool rest while machine is in motion.

80. Use face of wheel only, unless it is designed for grinding on the side. Otherwise, side pressure may break wheel. Whenever possible use entire face of wheel to avoid grooving it.

81. Never use a grinding wheel that is loose on the shaft or if its rate of speed is not safe for the number of r.p.m.'s of the spindle. Check with the instructor for this information.

82. Stop wheel if it chatters or vibrates excessively. This may be a danger signal that wheel is not properly balanced or not attached securely to spindle.

83. When replacing or mounting a grinding wheel, be sure that it is in good condition. Give wheel "ring" test. (Suspend free and clear and tap gently with light, nonmetallic implement. If wheel is sound, it will give clear, metallic tone when tapped.) And make sure wheel *fits* on spindle of grinder.

84. Hold job against wheel firmly so that it will not slip out of the hand and cause hands or fingers to come in contact with wheel. Use clamp or other suitable holding device for extremely short pieces. Do not wear gloves or use a rag to hold work; either of them could get caught in wheel and injure fingers or hands. Always use face shield or goggles even if grinder is provided with protective glass shields.

Buffing and Polishing

85. Wear close-fitting clothing. On jobs where wire mask or respirator, in addition to goggles, would increase your safety, always wear it.

86. Hold object to be polished against wheel at, or slightly below, level of shaft or arbor. Any object caught by wheel then will be thrown down—not toward operator. If possible, do not work directly in line with revolving wheel.

87. Hold small pieces to be buffed in a simple jig. *Do not wear gloves.* Never hold work object in corner of apron or other clothing when applying it to wheel.

88. Two persons should not attempt to polish two objects on a wheel at same time. When a helper is necessary in holding some large object against wheel, use good teamwork.

89. When applying rouge or tripoli to a revolving wheel, hold cake or stick lightly and apply its side to the wheel, rather than its end. Do not use a file for truing the wheel or rubbing off rouge or tripoli.

Squaring Shears

90. Keep guard on shears, and when shears are not in use, keep them locked.

91. Only one student at a time should operate shears.

92. Keep fingers clear of blade and moving parts. *Do not put fingers under knife*

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Set tool rest 1/8 of an inch from the grinding wheel. Don't set rest while machine is in motion.

To use the highways safely.
No fear of car or "cop."
Just keep your eye on OCKTY
He says, and means it, "STOP!"

"Be sure to stop" says OCKTY;
While DIMEY says, "Take care."
Old RECKY tells you how and why;
Be mighty glad they're there.

For curves or turns or hazards
Good DIMEY says "Go slow."
For highway information
Ask RECKY, he will know.

BOBBY fell sound asleep. The next thing he knew, someone was nudging him.

Bobby said, "Who are you?"

"My name is 'Dimey.' I'm one of the Highway Five. . . . I tell everyone on the highway of dips, curves, hills, slippery roads, and all sorts of things that they really should know for safety. . . . I have four cousins. They are Circky, Crossbucky, Recky and Ockty. We are the Highway Five."

Thus begins the story of "The Highway Five." A few materials, a little artistic ability, a generous helping of imagination and "The Highway Five" become the basis of a class project which is fun and educational.

Materials Needed

Stiff cardboard, for the faces, hands and feet of the signs. White canvas gloves, the fingers stuffed, make hands with a clever twist. Real shoes may be used in place of cardboard ones.

Wire wrapped in crepe paper or cardboard for the arms and legs (double thicknesses of cardboard is best).

Brads for making arm and leg points.

Paints—yellow, black and white.

Signs should be of the standard shapes and colors as set forth in the "Manual on Uni-

CIRKY stands near the railroad:
He's a real true sign to know.
And at the track CROSSBUCKY
Says "Be sure before you go!"

"Railroad ahead," says CIRKY.
CROSSBUCKY warns of trains:
If you know and heed these little guards,
We'll make real safety gains.

form Traffic Control Devices for Streets and Highways." These are:

Stop Sign—Octagonal. Black letters on a yellow background.

Speed Limit, etc. Sign—Vertical Rectangle. Black letters on a white background.

Warning Sign—Diamond. Black letters or symbols on a yellow brackground.

Advance Railroad Crossing Sign—Circle. Black letters and symbols on a yellow background.

Railroad Crossbuck Sign. Black letters on a white background.

The signs can serve as characters in student-written plays to be presented in assembly.

Puppet-type shows are another possibility, as is a school-wide exhibit of the signs.

You might want to use copies of "Highway Five" in your program. For information about obtaining this booklet, write the Signs of Life Program, National Safety Council.

The sign figures shown here and used in the booklet were reproduced through the courtesy of Mrs. E. F. Newell, Galion, Ohio, their creator; and D. E. Mumford, superintendent of safety, New York Central system, New York, N. Y., originator of the idea.

THERE'S SAFETY IN COLOR

by N. A. MASON

Abstract of a speech presented at the 38th National Safety Congress and Exposition.

INDUSTRIAL arts and vocational students should have a thorough understanding of the standard safety color code.

Color is a mental sensation, produced by light from a source, natural or artificial, striking reflecting surfaces of varying composition and structure, which absorb all, or unequal portions, of specific wave lengths and frequencies of light, and reflect the others to the nerve endings in the eye, activating the sensation of color to the brain. Since color is a mental sensation, it must have a subtle but positive impact on the mind causing conscious or unconscious reactions which influence all of us. We may have heard color has hue, value and chroma.

We also know every color has its complement, or opposite. We like some colors, tolerate others and dislike a few, simply because the stimulation caused by the mental sensation of color differs in individuals. We all agree our mental attitude is different on a bright, sunny, blue sky morning compared to a dismal gray one. Also our artificial color environment created by painted surfaces can influence our general mental attitude.

The same factors that have applied to a manufacturing area and equipment are equally important to a vocational shop, a classroom or laboratory.

Let us consider some of the factors involved when color is applied for its functional value, as well as for decoration. Thinking of school painting, we must first consider the use of the room or area. Classrooms used for art, science and sewing should be neutral colors, that is, colors in the gray family with light reflecting factors of 60 per cent to 65 per cent. The reason for gray is to eliminate color distractions in the work being done by reflected color from the walls or ceilings. The artist selects color against a neutral background. Matching thread color to the fabric color also requires a neutral background. Certain experiments made in science classes necessitate keen color vision, therefore, in such instances a neutral background will sharpen the contrast and make color change easily detected.

Normal classrooms used for general recitation and lecture should be colored according to orientation—cool colors for warm exposures, warm colors for cool, a combination of warm and cool for exposures in between. The front wall should be the focal wall, and the color should be lower in brightness than the other walls, for eye rest and attention value. The ceiling color should be white or off-white for good light reflection, the side and rear walls higher in brightness—colors reflecting 60 per cent to 70 per cent of the light striking them are recommended by authorities.

In classrooms where a visual task or concentration is required, we should avoid sharp contrasts. The walls should be in restful colors, such as a grayed blue-green of about 30 per cent light reflectance.

Teachers' workrooms should be in calming, cool colors; their rooms for relaxation should be in restful, cool colors—low in brightness for best results.

The following suggestions concern color and its relationship to psychology:

1. If you want to enjoy food, use appetizing colors in the dining area. Peach, light cool green and tan have appetite appeal.
2. If you want to get along with others, avoid colors that clash. Use simple appealing colors, such as blue, green or rose.
3. If you want to have fun, go for the bright gay colors. Bright reds, yellows, greens and blues in a variety of values will add spice to life.
4. If you desire cleanliness in a room, use light colors that show up the dirt.
5. If you want to relax, select colors that are cool, fairly deep, but not too vivid. The cool shades of green, blue and gray are best. Also avoid color contrasts that distract attention.
6. If you want to be safe, use colors that alert you to hazardous things or objects. Vivid yellow and orange, or parallel bands of black and orange will identify falling-over or stumbling hazards.

(Please turn to page 39)

MR. MASON is manager of Maintenance-Painter Sales, Pittsburgh Plate Glass company, Pittsburgh, Pa.

January, 1951

Lower Elementary Safety Lesson Unit

SCHOOL AND COLLEGE DIVISION—NATIONAL SAFETY COUNCIL—CHICAGO 11, ILL.

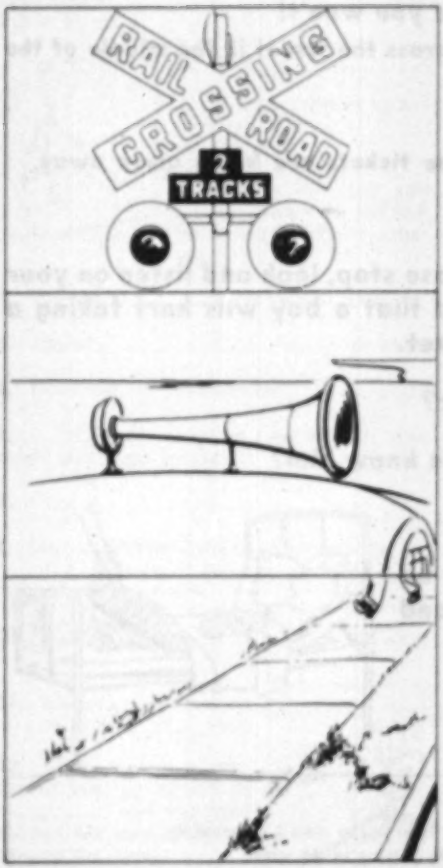
Teaching language arts, social studies and safety

Sketch S9050A

Stop. Look. Listen!
PEDESTRIAN SAFETY

Safety Puzzle Test

Copy and—
Fill in blanks.



1. I have red lights. When I ring my bell and flash on and off, people know that a train is coming. I am a _____.

2. I make a loud noise. I try to keep people from getting hurt. It is not safe to depend on me. I am a _____.

3. I am made of concrete. I stretch along streets so people have a safe place to walk. I am a _____.

Answers to "Safety Puzzle Test"—1. Signal. 2. Horn. 3. Sidewalk.

Prepared under the direction of Helen Halter Long, principal, Mamaroneck Junior High school, Mamaroneck, N. Y. 1 to 9 copies of this unit, 5 cents each. Lower prices for larger quantities. Printed in U.S.A.

The Short Cut—To the Hospital!

Scene 1—On the street.

PEG: Where are you going, Dick?

DICK: This is a short cut. Come on!

TOM: But, Dick, you will be walking on the railroad tracks that way!

DICK: Yes, and I'll be crossing in the middle of the block, too. But I want one of those free tickets. If you wait for the lights, you'll never get there!

BILL: Oh, yes, we will. But maybe *you* won't!

(Paying no attention, Dick dashes across the street in the middle of the block.)

Scene 2—At the store where the free tickets are being given away.

PEG: I wonder where Dick is.

POLICEMAN: Boys and girls, please stop, look and listen on your way home. We have just heard that a boy was hurt taking a short cut to get here for a ticket.

TOM: What was his name, officer?

POLICEMAN: Dick Brown. Do you know him?

TOM: Yes, we all do.

BILL: Poor Dick! Why couldn't he be smart about safety? Let's go and see how he is.

END

Let's Talk About—

1. How your ears can help you to cross a street safely.
2. What is wrong with playing in the street.
3. Why you should stay off railroad tracks.

January, 1951

Upper Elementary Safety Lesson Unit

SCHOOL AND COLLEGE DIVISION—NATIONAL SAFETY COUNCIL—CHICAGO 11, ILL.

Teaching language arts, social studies and safety

Sketch S9050A

Stop. Look. Listen!
PEDESTRIAN SAFETY

So You're Walking in the City!

Copy and—
Fill in blanks.

1. Walk on _____.
2. Remember that on ice and snow cars need _____ room to stop.
3. Stop at the curb and _____ both ways, and look for turning cars before crossing.
4. It is best to _____ across a street; not to run.
5. Play in a _____; not in the street.
6. Don't dash out from between _____ cars.
7. _____ a ride on a car or truck often results in a tragic accident.
8. Cross at _____.
9. Most pedestrian accidents take place in the _____ hours of darkness, especially in the fall and winter months.
10. Wait on the _____; not in the street for a bus.
11. Always get into and out of a car on the _____ side.
12. When leaving a commercial bus, go directly to the _____ and wait until the bus has gone on before crossing the street.

Let's Talk About the Sketch

1. How can you use your ears to cross a street safely?
2. What are the three bad traffic habits of 5 to 14 year olds that are most likely to result in their injury?

So You're Walking in the Country!

Copy and—
Fill in blanks.

1. Where there are no sidewalks, walk on the _____, facing traffic.
2. At dusk or night when walking on a highway, carry a _____.
3. On rainy or dark days wear something _____.
4. The faster a car is going, the more room it needs to _____.
5. Be just as _____ when walking with a group as when you are alone; don't depend on others to watch out for you.
6. Don't _____ suddenly into the road after a ball or pet.

Prepared under the direction of Helen Halter Long, principal, Mamaroneck Junior High school, Mamaroneck, N. Y. 1 to 9 copies of this unit, 3 cents each. Lower prices for larger quantities. Printed in U.S.A.

A Short Cut—to the Hospital!

Scene 1. A group of boys and girls are hurrying down the street.

PEG: Where are you going, Dick? That isn't the way.

DICK: Come on, everybody, this is a short cut.

TOM: But, Dick, you'll be crossing the trestle that way.

DICK: Yes, I'll cross the trestle, walk along the railroad tracks, and cut across streets, but I want one of those free tickets. If you wait for the lights, you'll never get there!

BILL: Oh, yes, we will, but maybe you won't! No free ticket is worth taking a chance on meeting a train on that trestle.

SUE: And even if you didn't meet a train on the trestle, you might get your shoe caught in the track like that boy Miss Martin told about.

DICK: That wouldn't happen to me! What sissies you are!

TOM: I don't think so. We're just smarter than you are.

LINDA: Besides, you won't save more than a few minutes running across in the middle of the block!

DICK: All right. Let's just see. I'm taking the short cut!

(Dashes across the street in the middle of the block)

Scene 2. At Brown's Department Store where the free tickets are being distributed.

LINDA: I wonder where Dick is. I don't see him anywhere.

TOM: Shush. The policeman is making an announcement.

POLICEMAN: Boys and girls, when you have your tickets, please go home carefully. Don't forget to stop, look and listen at every corner. We have just had a report that a boy was hurt taking a short cut to get here for a ticket. These tickets are given by a business man to help you have fun—and it's no fun to have an accident!

PEG: I'll bet that was Dick who was hurt.

BILL: Poor Dick! I hope he isn't hurt very bad. He just isn't smart about safety!

LOOK! LISTEN! LIVE!

Every year more than 100 children under 15 years of age are killed while trespassing on railroad equipment. Another 100 children receive injuries while trespassing on railroad equipment.

Perhaps some boys and girls do not know that railroad tracks are not public property. Never trespass on railroad tracks, bridges or embankments.

The following railroad safety suggestions are important:

1. Don't walk on a trestle. One train thundering by may *cause* a person to lose his balance; trains coming from both directions probably would bring death to the person walking on a trestle.

2. Don't walk along railroad tracks. You might catch your foot in a track and be unable to get it out in time if a train should appear suddenly, or for some other reason you might not succeed in getting out of the way of a train—as happened in the following true newspaper report:

Train Kills Two Boy Hikers

Members of the train crew said the boys failed to heed the approach of the train or hear its whistle. The engineer jammed on the brakes, but the speeding train was not halted until after it struck the boys.

3. Notice and heed railroad warning signals like these:

Junior High Safety Lesson Unit

January, 1951

SCHOOL AND COLLEGE DIVISION—NATIONAL SAFETY COUNCIL—CHICAGO 11, ILL.

For use in English, social studies, mathematics, art, guidance and homeroom

Sketch S9051A

Keep Moving—But Slow Down

SCHOOL SAFETY

Practicing Library Skills

Copy and—
Write the letter of the volume in the space before each question.

Part I. Locating Information in the Encyclopedia

1. In which volume would you find information about school safety patrols?
2. In which *two* volumes might you find information on how to give first aid to someone who had suffered a severe burn?
3. In which volume would you find information about prevention of accidents?
4. In which volume might you find out how automatic fire sprinklers work?
5. In which volume might you find information about winter sports safety?
6. In which volume would you find information about the National Safety Council?
7. In which volume could you find information about the safe use of hand tools?
8. In which volume could you find information about water life saving?

Part II. Using the Card Catalog

A	B	C	D-E
F	G	H	I-K
L	M	N-O	P
Q-R	S	T-V	W-Z

1. In which drawers of the card catalog would you be likely to find references on playground safety?
2. In which *three* drawers of the card catalog would you be likely to find a card for the book *Youth at the Wheel*, by L. J. Flaherty?
3. If you don't know the author's name but want to find a book called *New World Chemistry*, that contains chapters on fire safety, in which *three* drawers of the card catalog might you find it listed?
4. If you want to find a reference about artificial respiration and you can't find a book listed under that heading, in what other drawers might you find a reference?
5. If you want to find a handbook about the correct and safe use of rifles, in what *three* drawers might you find a reference?
6. The book *Camping Can Be Fun*, by Robert W. Weaver, containing information about safe camping practices might have cards in which *three drawers*?

Part III. Using Library Materials to Learn Safety

1. Arrange a display of books and materials containing interesting safety ideas.
2. Look up some phase of safety in which you are interested, such as fire safety, firearm safety, safety and electricity, sports safety, traffic safety or home safety. Tell the class some interesting fact about the topic you look up.

Hall and Corridor Safety

Copy and—
Complete sentences.

Below are sentences that have been divided. The first part of each sentence is in column 1. The last part is in column 2. Complete the sentences with the proper endings.

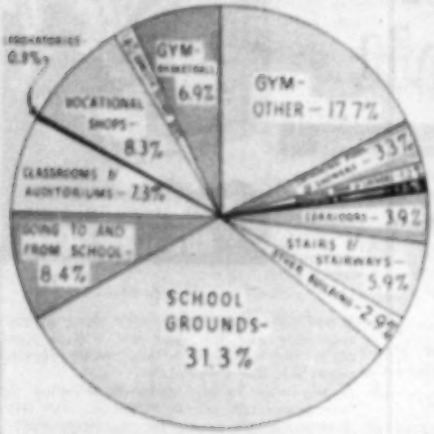
Column 1	Column 2
1. Descend stairs	should never be locked
2. Running in the halls	should keep right.
3. Corridor traffic	one at a time.
4. Doors with panic bolts	well-lighted.
5. Halls should be	is childish.
6. Stair landings should	be unobstructed.

Prepared under the direction of Forrest E. Long, chairman of the department of secondary education, New York University, New York, N. Y., and Helen Halter Long, principal, Mamaroneck Junior High School, Mamaroneck, N. Y. 1 to 9 copies of this unit, 5 cents each. Lower prices for larger quantities. Printed in U.S.A.

Where Junior High School Accidents Take Place

(based on figures from schools reporting to the National Safety Council, 1948-1949)

Copy and—
Study the graph. Mark the following questions *true* or *false*.



1. More junior high school accidents take place in the building than on the grounds.
2. Accidents in vocational shops are more numerous than are accidents in laboratories.
3. Classroom and auditorium accidents outnumber corridor and stairway accidents combined.
4. Basketball accidents are more numerous than any other type of school accident.
5. Accidents never occur in locker rooms.

An Analysis of the Causes of Junior High School Accidents

(based on a special study in New York City, 1943-1944)

Tripping—catching toe or heel on stair steps, desk, chair, table legs; tripping over books, wearing apparel, pencil, music stand, play apparatus; stepping on one's shoe laces; tripped by another person, a raised step, a threshold 13.0%

Struck by Object—thrown object (ball, stick, bat, stone, book, chalk, eraser, pencil), falling object (desk top, standard, window pole, screen, flower pot, doorjamb or stop, window pane, milk bottle, phonograph record, book), swinging door 12.4%

Contact With Sharp Object—pencil, pen, pin, needle, splinter, scissors, nail file, pocket knife, tacks and nails, broken bottles and glass, razor blade, compass, window pane (pushing hand through window pane or glass panel in door) 12.0%

Slipping—in classroom aisle, on wet floor (near fountain, in corridor, near entrance landing), on icy step and walk, on stairs, in washroom 8.3%

Collision With Person—while running in corridors, classrooms, on stairs, in play activities and athletics; while walking backward; while walking with head down 8.1%

Caught in Door—fingers between door and frame, between double swinging doors; fingers caught in locker door 5.6%

Running—in corridors, classrooms, washrooms, gymnasiums; on stairs; in play activities 5.4%

Collision With Object—running into building, gate, playground fence, classroom equipment; striking head on stairs, running against closed door 5.4%

Falling—while swinging between desks; from door ledge; from desk, chair, table, bench apparatus, ladder, tree; while running on stairs, in corridors, in classrooms, in swimming pool room; while pushing a chair, box 5.4%

Pushing—on stairs; against desk, table, radiator; while marching out of and into the school building during fire drill; pushing another person from a chair, desk, table 4.1%

Other Factors 20.3%

After reading the analysis of the causes of junior high school accidents given above, make a list of "School Accident Prevention Measures," listing such specific prevention measures as "Keep school aisles clear of books." If each prevention idea could be illustrated with a drawing, an interesting display could be arranged.

Senior High Safety Lesson Unit

January, 1951

Sketch 5905LA

SCHOOL AND COLLEGE DIVISION—NATIONAL SAFETY COUNCIL—CHICAGO 11, ILL.

For use in English, American history, American problems, art, shop, science, guidance and homeroom

Keep Moving—But Slow Down

SCHOOL SAFETY

Checking Schools for Safety

Copy and—
Fill in blanks.

Checking School Corridors

1. Stair treads should be firm and their surfaces _____ and _____.
2. All stairs should have _____ that are smooth, strong and firmly fastened in place.
3. All outside doors should open _____.
4. All panic bolts should be in good operating condition and free of _____.
5. All stair landings and heads of stairways should be _____.
6. Trophy cases should not interfere with corridor _____.
7. Lockers should be recessed into walls or fastened in place securely so they cannot _____.
8. Student traffic in the halls should move at a brisk but not a running pace and should keep to the _____.

Checking Science Laboratories

1. Each piece of gas and electric equipment should bear the seal of the _____.
2. Each piece of equipment should be checked _____ time it is used.
3. All gas equipment should be checked regularly for _____.
4. _____ space should be provided around all working equipment.
5. The number of students assigned to or allowed to work at a piece of equipment should be _____ within the safe maximum.
6. Aisles and exits should be kept free from _____.
7. All paints, solvents and other volatile materials should be stored in paint storage cabinets made according to standards of the National _____ Protection Association.
8. An approved fire blanket, clearly marked, should be easily _____.
9. All materials should be clearly and accurately _____, especially poisonous materials which should be marked with the skull and crossbones and the word _____.
10. All oily rags should be stored in closed _____ containers.
11. If experiments in which toxic, explosive or malodorous gases are generated are included in the curriculum, a hood equipped with a _____ should be used.
12. Sinks, drainboards and drains should be made of _____ materials.
13. Containers in which acids and caustics are put should be examined frequently for _____.
14. Rubber gloves, goggles and aprons used when handling corrosive material should be washed _____ each use.

Checking School Shops

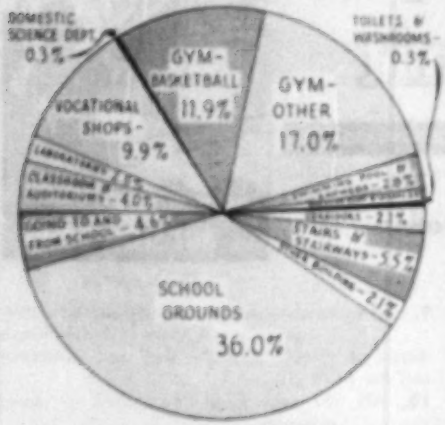
1. Machines should be located so that students have enough _____ to work safely and so that there is no _____ with feeding and off-bearing stock.
2. There should be _____ artificial light, as well as the best arrangement for the use of natural light.
3. Work benches and tables should be arranged to provide plenty of aisle room for safe _____.
4. Hand tools should be free of _____ heads or splintered or loose _____.
5. Wooden floors should be free from loose, warped or broken boards or rough or splintery surfaces or protruding _____.

Prepared under the direction of Forrest E. Long, chairman of the department of secondary education, New York University, New York, N. Y., and Helen Heiser Long, principal, Mamaroneck Junior High School, Mamaroneck, N. Y. 1 to 9 copies of this unit, 5 cents each. Lower prices for larger quantities. Printed in U.S.A.

Where Senior High School Accidents Take Place

(based on figures from schools reporting to the National Safety Council, 1948-1949)

Copy and —
Study the graph. Mark the following questions *true* or *false*.



1. More than twice as many senior high school accidents take place in the building as take place on the school grounds.
2. Accidents in vocational shops are more numerous than are accidents in laboratories.
3. Classroom and auditorium accidents outnumber corridor and stairway accidents combined.
4. There are no washroom and locker accidents in senior high schools.
5. Basketball accidents are one of the most frequent kinds of building accidents.

An Analysis of the Causes of Senior High School Accidents

(based on a special study in New York City, 1943-1944)

Contact with Sharp Object—pencil, pen, pin, needle, splinter, scissors, nail file, pocket knife, tacks and nails, broken bottles and glass, razor blade, compass, window pane (pushing hand through window pane or glass panel in door) 12.1%

Struck by Object—(thrown object (ball, stick, bat, stone, book, chalk, eraser, pencil), falling object (desk top, standard, window pole, screen, flower pot, doorjamb or stop, window pane, milk bottle, phonograph record, book), swinging door 11.7%

Tripping—catching toe or heel in stair steps, desk, chair, table leg; tripping over books, wearing apparel, pencil, music stand; play apparatus; stepping on one's shoe laces; tripped by another person, a raised step, a threshold 9.2%

Slipping—in classroom aisle, on wet floor (near fountain, in corridor, near entrance landing), on icy step and walk, on stairs, in washroom 8.6%

Collision with Person—while running in corridors, classrooms, on stairs, in play activity and athletics; while walking backward; while walking with head down .. 7.8%

Falling—while swinging between desks; from door ledge; from desk, chair, table, bench, apparatus, ladder, tree; while running on the stairs, in corridors, in classrooms, in swimming pool room; while pushing a chair, table, box 7.7%

Collision with Object—running into building, gate, playground fence, classroom equipment; striking head on stairs, running against closed door 5.9%

Caught in Door—fingers between door and frame, between double swinging doors; fingers in locker door 5.5%

Running—in corridors, classrooms, washrooms, gymnasiums; on stairs; in play activities 5.4%

Fighting—on playgrounds, in classrooms, corridors, cafeteria, while on monotorial duty; set upon by gang 3.8%

Other Factors 34.4%

After reading the analysis of the causes of senior high school accidents given above, make a list of "School Accident Prevention Measures," listing such specific prevention measures as "Keep school aisles clear of books." If each prevention idea could be illustrated with a drawing, an interesting display could be arranged.

Views AND REVIEWS

SAFETY TEACHING AIDS

BOOKS AND PAMPHLETS

APPRENTICE JOE LEARNS CONSTRUCTION SAFETY. 12 pp. Illustrated. Washington, D.C.: U. S. Department of Labor, 1950. Limited quantity free from Bureau of Labor Standards. Quantities, 10 cents each, with 25 per cent discount on order of 100 or more, from Superintendent of Documents, U. S. Government Printing Office.

Though designed for use in the building trades and for those recently entering apprentice training, this booklet contains certain information applicable to almost any shop, including school shops. The construction foreman advises Joe about why and when to wear safety shoes, helmet and goggles; and he tells him about handling rough or sharp materials, how to lift properly, how to pile materials, the value of good housekeeping on the job, safe care of tools, and the danger of horseplay.

Illustrations are amusing and instructive.

CAMPING. Arthur H. Des Grey, Ed.D. 171 pp. Illustrated. New York, N. Y.: The Ronald Press Co. 1950. $3.00.

Camping trips may be distinctly pleasurable occasions, or they may be accident-fraught periods of misery. The camper's knowledge, information and safety skills will provide the answer—for better or for worse.

In his book Mr. Des Grey gives the necessary information and know-how for persons to enjoy the outdoor world in safety and comfort. And this applies not only to beginners but to seasoned campers as well, who may also have need for further instruction or a review of their present knowledge.

The book has six chapters which cover practically all phases of camping. In nearly everyone of these chapters there is a section on safe practices. Safety is also integrated throughout the entire volume. And this is saying a lot when one stops to think that the act of camping itself, and the equipment used, bring up such items (to mention only a few) as small boat safety, ax and knife safety, campfire safety, safe fishing practices, handling and using firearms safely, etc.

The illustrations are many and instructive, and each chapter is followed by a bibliography, should the reader wish to delve further into any particular phase.

SO . . . YOU'RE GOING TO TEACH JOE TO DRIVE! Howard Flanagan and Dan Hollingsworth. 24 pp. (Mimeo.) Oklahoma City, Okla.: Oklahoma City Safety Council. 1950.

As stated by the authors, this book is by no means written to replace formal driver education in organized classes, but it is a handy tool for those countless fathers, mothers, brothers, sisters, etc., who by force of circumstances, find themselves teaching someone else to drive.

The material is presented in a series of 13 lessons, plus many other valuable pointers, for both teacher and pupil. Best of all, the approach is easy, natural and effective.

FUN ON WHEELS. 16 pp. Illustrated. Hartford, Conn.: Aetna Casualty and Surety Co. 1950. Free.

This little booklet offers a concise, effective treatment of the safe use and care of the bicycle.

Stressed are rules of the road as applicable to both cyclist and motorist, proper safety equipment for the bicycle, how to ride properly, and maintenance tips.

VISUAL AIDS

BICYCLE SAFETY. 1 reel sound. New York, N. Y.: Young America Films, Inc. 1950. $40. Preview prints, no charge.

Safe riding habits among cyclists may well be taught and promoted by this up-to-date film on bike riding. Pointed out to every bicycle owner and rider are such vital responsibilities as inspecting and keeping the bicycle in good mechanical condition and obeying traffic rules and practices.

After discussions with many authorities, the producers of this film have included the use of *negative* teaching. The sum of the

discussions seemed to prove that such teaching aids, at certain times, in certain subjects, is completely justified and effective.

This film proves that point.

SCREW DRIVERS AND SCREW JAYS. Re-issue. 16 mm. Sound film. New York, N. Y., and San Francisco, Calif.: Shell Oil Co. Free.

After playing to an audience of 10 million, in some 70,000 showings, the film "Screw Drivers and Screw Jays" has been modernized and re-issued.

Produced in co-operation with the National Safety Council, the film was so named to designate careless motorists and pedestrians respectively. It portrays some of the foolhardy acts of both motorists and pedestrians.

Instead of a gory or tragic treatment, the highway problem is handled in a light, humorous (none-the-less thought-provoking) vein. A major use of the film has been in driver education classes.

To responsible organizations, the film may be obtained free of charge by writing to Shell Oil Company, Public Relations Department, 50 W. 50th St., New York 20, N. Y., or 100 Bush St., San Francisco, Calif.

WHO'S DOING WHAT—WHERE

New York, N. Y.—New York university announces the following staff appointments: Walter A. Cutter, assistant director; Mary K. Moran, administrative assistant; J. Duke Elkow, research associate; S. Kirklen Collins, lecturer.

Washington, D. C.—M. D. Mobley, since 1937 state director of vocational education for Georgia, has been elected executive secretary of the American Vocational association. He will replace Dr. L. H. Dennis, the present incumbent.

Mr. Mobley will take over his duties on Jan. 1, 1951. He was president of the American Vocational association in 1945.

Carma A. Mowrey was elected president of the National Education Association . . . Glen E. Snow was named assistant secretary for Lay Relations.

Mildred Fowler of Baltimore has been appointed to the National Commission on Safety Education . . . Stanley A. Abercrombie has been named acting secretary of the Commission to succeed Robert W. Eaves, who has accepted the post of executive secretary of the National Education Association, Department of Elementary School Principals.

RE COURSE

Oswego, N. Y.—A ten-week basic course outline in adult driver education has been developed by the safety education department, State Teachers college, Oswego, for use in connection with high school driver education programs.

The course outline shows the procedures and methods of organizing a program, length of classroom instruction and practice driving periods, materials and equipment needed, and step-by-step instruction for classroom work.

An outline will be sent upon request by addressing Mr. Howard Hall, director of safety education for the college.

COMING EVENTS

Feb. 6-7, Philadelphia, Pa.—Seventeenth Annual Philadelphia Regional Safety Conference and Exhibit (Bellevue-Stratford hotel). Contact Walter W. Mathews, managing director, Philadelphia Safety Council, 17th and Sansom Streets, Philadelphia 3, Pa.

TRAFFIC SURVEY

Mt. Holly, N. C.—Mount Holly, a small town with a population of 2,525, is bisected by a railroad which crosses the main street. This intersection has been a serious traffic problem, because many children have to cross both the highway and the railroad to get to school. A traffic check was conducted by the driver education classes in co-operation with the high school safety patrol, junior high school safety patrol, and the police.

In spite of the fog and cold weather checkers appeared at their posts at 7:00 a.m. each morning to tally pedestrians and motorists turning and crossing intersections.

What happened with the four days' class work while the survey was being made? The entire faculty co-operated. It took the initiative of each teacher to integrate the experiences of the surveyors with the regular class work. Students were graded on their survey.

Preparation for the survey began three weeks before the actual checking started. The driver education students with the aid of town maps studied intersections and, with the assistance of advisors, chose to concentrate on 12 strategic points. Safety patrol members were invited to co-operate with the 26 driver education students. The chief of police came to the school and addressed the group. He made an inspiring and helpful talk revealing the importance of this traffic survey and the need for properly placed traffic control signs and signals.

Letters giving the purpose and information of the survey were sent to parents or guardians of the 48 students participating. Written permission being granted by the parents, students were then ready to be assigned to a post and a shift. Each post was numbered and a captain assigned. Shifts were taken from 7:00 a.m. to 1:00 p.m. and from 1:00 p.m. to 7:00 p.m. Two persons worked each shift, one checking pedestrians and the other checking vehicles. Hourly records of left turns, right turns, and straight through traffic in all directions were recorded on forms which were issued all checkers. These forms were simplified by the use of codes. Vehicle records were also kept for speeding, failure to give hand signals where needed, and failures to stop for signs and signals. Pedestrian records tallied crossings against lights and jaywalking.

Tabulations from the survey showed surprisingly few traffic violations. When the motorists realized something was going on, all drivers began signaling, and speeders began slowing down.

We also made a bicycle check, to help instill safety consciousness in the cyclists of Mt. Holly. These questions were asked:

1. Do you ride your bicycle to school? Regularly or occasionally?
2. Have you had an accident this year? Was any damage done to your bicycle?
3. Where do you park your bicycle at school?
4. On what side of the street do you ride?
5. Do you ride bicycle on sidewalk?
6. Do you signal when turning corners or when stopping on your bicycle?
7. Should you zigzag when climbing or descending a hill?
8. Do you keep the handle bars of your bicycle tight and properly adjusted?
9. Is your bicycle equipped with a light, horn and reflector?
10. Are the spokes on your bicycle loose or broken?
11. Does the bicycle chain slip?
12. How much air do you have in your bicycle tires?
13. Are the brakes on your bicycle in good working condition? Do you check them periodically to insure their being in the best condition possible?
14. Do you ever ride double on your bicycle?

The chief benefit of these projects, I feel, is the safety consciousness of the school children, parents and the community as a whole. However, there is a street light to aid the policeman in directing traffic at this intersection now.—**Mrs. Clyde Loftin,** driver education instructor, Mt. Holly (N. C.) schools.

Florida Shifts Into High

(Continued from page 10)

developed with the Department of Public Safety to keep records of those who have had driver education in order that research studies may be made to determine the effectiveness of the program.

Although great progress has been made in a relatively short time, the public schools of Florida are still short of the ultimate goal, that of providing driver education for all students as they reach legal driving age. The program at present reaches about 5,000 of the 21,000 high school students who attain legal driving age each year.

School Fire Safety

(Continued from page 13)

outside. Fastening chairs to the floor in cafeteria and assembly halls is an antipanic measure.

We cannot stress too much the importance of good housekeeping, and the immediate disposal of all refuse materials. Competent supervision of all school activities is essential, as is fire prevention education of teachers, students and all school personnel.

The first duty of the school staff at the time of a fire is to evacuate completely the building. Fire drills, well planned and properly conducted, help to secure the orderly and rapid exit from the building and are a panic-control measure. A definite system of signs should be adopted to avoid any confusion when the failure of a regular escape door necessitates changing the route of exit.

Data Sheet

(Continued from page 19)

or hold-down bar. Remember that shears make razor-sharp edges on sheet metal.

93. Do not attempt to cut more than one thickness at a time and be sure gauge of metal is not too heavy for machine.

94. To avoid crushing toes, do not get feet in way of foot pedal, and do not jump on foot pedal.

95. While stepping on foot pedal, never reach behind machine.

Alligator Shears

96. Be prepared for "kickup" of material being cut. Do not attempt to prevent it but retain secure hold on material. Otherwise, material may swing and drop on feet after cut is made. Shears should be equipped with a kick bar or bracket under which stock can be placed while making cut.

97. Do not cut stock less than 10 or 12 inches long; your hand may be squeezed between stock and some stationary part of the shears.

98. When cutting more than one piece of stock at the same time, avoid pinching fingers between pieces of stock.

99. Do not attempt to cut hardened steel.

Bar Folder

100. Only one person at a time should work on this machine.

101. Remove hands from work as soon as work is in machine.

102. Keep fingers away from folding blade during bending operation, and hold handle firmly; do not permit it to drop back. Other persons should stand clear in case handle should slip.

Press Brakes

103. Keep hands from beneath ram and away from clamping bar and bending lead.

104. Never attempt to adjust position of stock when ram is in motion.

105. When operating the machine, make certain no one is in area of leaf bar or balancing weight.

106. Do not overload machine.

Power Press

107. Be sure work is securely set in bed and in perfect alignment with pressure ram.

108. Make provision to catch shaft, pins, or other unit being forced out.

109. At all times keep hands away from pressure ram.

110. See that ratchet is caught on gear before applying power.

111. Do not use excessive pressure.

112. When finished with press, leave ram against pressure table.

Forming Rolls

113. Keep fingers away from rolls and feed work carefully so fingers will not follow work into rolls.

114. The control lever should be extended full length of roll for emergency use from any position.

Ovens

115. Do not light ovens except *under closest supervision of instructor.*

116. Before starting oven, set thermostat at proper temperature.

117. Keep oven closed while heat is on.

118. Use a rod or tongs for removing articles from hot oven. Do not reach in with the hands.

Gas Furnaces

119. Check for gas leaks before lighting.

120. To light furnace: use small, oil-soaked rag or piece of waste; light rag or waste and drop into furnace; *then* turn on gas. This will prevent an explosion. Stay out of range of flame.

121. Flame should be adjusted so it does not extend beyond furnace. And do not touch any part of furnace after it has started.

122. There should be no flammable material near furnace.

123. See that gas valve is completely closed when furnace is turned off.

124. Except when heating solder pot, keep furnace cover in place.

SOLDERING

125. In addition to goggles, wear face shield and gloves.

126. Keep sleeves rolled down, shirt collar buttoned, and trouser legs over shoe tops.

127. Melt solder only in a *thoroughly* dry pot or ladle, secured so it can't upset.

128. Never put chilled solder or a *moist* object into hot solder pot or ladle.

129. Place hot irons on racks or holders away from all combustible materials.

130. Turn off current before leaving electric soldering irons. Keep wire and connections in good condition.

131. Do not test temperature of an iron by holding it near face.

132. Do not snap or throw solder to get it off a hot iron.

ELECTRIC ARC WELDERS

133. Wear clothing that completely protects body from rays of arc and from hot metal sparks, and do not wear white clothing when arc welding.

134. Do not touch electrode if you are grounded, and be sure to keep insulated while changing electrodes.

135. With portable arc welding machines, make certain that handle on switch is in "off" position before inserting plug in power receptacle and that interlocking plug is secure.

136. Never look at the arc or its reflection with the naked eye or with gas welding goggles. Wear welding hood and hardened lens safety goggles at least shade number 10.

137. Hood must be in place before striking arc.

138. Keep shields in place to protect others from rays of arc and warn them not to look at arc. Persons working nearby not protected by shields should also wear protective goggles.

139. Keep a fire extinguisher on hand for all welding jobs.

140. Use noncombustible material to support work.

141. Do not work on containers that have held gas, gasoline, oils or other flammable liquids.

142. Avoid tangled cables and do not let them touch hot metal. Where possible, keep cables in overhead brackets.

143. Do not throw rod stubs on floor; they are a slipping hazard. Use scrap container provided.

144. Before picking up any metal pieces in welding shop, check to see that they are not hot. They could cause serious burns.

OXY-ACETYLENE WELDING

145. Keep all connections gastight between cylinders, apparatus, hose and piping; and keep them free of grease, oil, dust and dirt.

146. Inspect hose regularly and replace old or worn sections.

147. Before using a cylinder of oxygen or acetylene always reduce pressure through a pressure regulator attached to cylinder valve. And be sure that regulator pressure adjusting screw is fully released before regulator is attached to cylinder and cylinder valve is opened.

Hood, goggles, leather apron, sleeves, and gloves protect this welder. His entire body is covered.

148. When opening cylinder valve, open slowly and always stand to one side and away from in front of pressure regulator gauge faces. Open oxygen cylinder all the way. Open acetylene cylinder valve not more than one-half turn.

149. Use proper mixture in welding torch and always *maximum* amount of gas for given size welding tip.

150. Use friction lighters or stationary pilot flame for lighting torches—*not* matches; never light torch from hot metal in any small space where gas may accumulate. And do not open acetylene valve more than one-eighth of a full turn when lighting torch.

151. If torch burns inside blow pipe or flashes back, turn off oxygen valve at once. Then turn off acetylene valve and relight and adjust flame.

152. See that all valves are closed and pressure released from hose and regulators when equipment is not in use.

153. Acetylene should not be used at pressures in excess of 15 pounds per square inch gauge.

154. Do not allow molten metal, slag or sparks to fall on cylinder, hose or apparatus.

155. Oxygen under pressure should never come in contact with oil or grease.

156. Since gas is under high pressure, do not jar cylinders or leave them near a hot furnace. Gas cylinders should be suitably supported in a rack or other device to prevent their being knocked over.

ACIDS

157. Where *minor* splashing is the only hazard, wear goggles, rubber boots, rubber apron and gloves.

158. Tuck glove gauntlets inside sleeves and keep trouser legs outside of boots.

159. When opening container be alert for sprays or splashes of acid.

160. To dilute, pour acids into water—*not* water into acid. Pour slowly and stir.

161. Clean up any spillage at once.

162. Do not place acid containers near hot pipes or equipment nor let them stand in the sun.

163. Flush off acid splashes at once with plenty of clean, running water.

SOURCES

164. Industrial Data Sheets. Chicago, Ill.: National Safety Council.

Alligator Shears. 2 pp. Illustrated.
Engine Lathes. 2 pp.
Metal Planers. 2 pp.
Metal Saws. 2 pp.
Metal Shapers. 2 pp.
Metal Squaring Shears. 2 pp.
Metal-Working Drill Presses. 2 pp.
Metal-Working Milling Machines. 2 pp.
Press Brakes. 3 pp. Illustrated.

165. Industrial Safety Guide. 48 pp. Illustrated. Chicago, Ill.: National Safety Council.

166. Ohio School Standards—A Guide for Industrial Art Shop Planning. 40 pp. Columbus, Ohio: Department of Education, State of Ohio. 1949.

167. Safety Education Data Sheet No. 14—Chemicals. 4 pp. Illustrated. Chicago, Ill.: National Safety Council.

168. Safety Education Data Sheet No. 41—Home Work Shops. 6 pp. Illustrated. Chicago, Ill.: National Safety Council.

169. Safety Education Data Sheet No. 46—Safety in the Woodshop. 8 pp. Illustrated. Chicago, Ill.: National Safety Council.

170. Safety Education in the School Shop. 68 pp. Illustrated. Chicago, Ill.: National Safety Council. 1948.

171. Safety Instruction Cards. Chicago, Ill.: National Safety Council.

Bench Workers—No. 400
Buffing and Polishing—No. 482
Carboys—No. 224
Drill Press Operators—No. 87
Electric Arc Welders—No. 68
Foundry Safe Clothing—No. 309
Machine Operators—No. 306
Machine Shops—No. 299
Metal Lathe Operation—No. 89
Metal Planer Operators—No. 298
Milling Machine Operators—No. 297
Oxy-Acetylene Welding—No. 467
Power Press Operators—No. 65
Protection Against Chemicals—No. 42
Soldering—No. 164
Sulphuric Acid—No. 242

172. School Shop Safety Manual. 240 pp. New York, N. Y.: Board of Education of the City of New York. 1948.

173. Shop Safety. 32 pp. Illustrated. Chicago, Ill.: National Safety Council. 1949.

174. Shop Safety Education. The State Education Department. 319 pp. Illustrated. Albany, N. Y.: Distributed by Delmar Publishers, Inc. 1949.

Other Safety Education Data Sheets now available are:

(1) Bicycles
(2) Matches
(3) Firearms
(4) Toys and Play Equipment
(5) Falls
(6) Cutting Implements
(7) Lifting, Carrying and Lowering
(8) Poisonous Plants
(9) Electric Equipment
(10) Pedestrian Safety
(11) School Buses
(12) Flammable Liquids in the Home
(13) Passenger Safety in Public Carriers
(14) Chemicals
(15) Hand Tools
(16) Nonelectric Household Equipment
(17) Sidewalk Vehicles
(18) Camping
(19) Alcohol and Traffic Accidents
(20) Cooking and Illuminating Gas
(21) Solid and Liquid Poisons
(22) Safety in the Gymnasium
(23) Laboratory Glassware
(24) Places of Public Assembly
(25) Fireworks and Blasting Caps
(26) Domestic Animals
(27) Swimming
(28) Small Craft
(29) Play Areas
(30) Winter Driving
(31) Night Driving
(32) Winter Sports
(33) Traffic Control Devices
(34) Safe Conduct in Electrical Storms
(35) Poisonous Reptiles
(36) Motor-Driven Cycles
(37) Animals in the Classroom
(38) Railroad Trespassing
(39) Bad Weather: hazards, precautions, results
(40) School Parties
(41) Home Workshops
(42) Horseback Riding
(43) Hiking and Climbing
(44) Hook and Line Fishing
(45) Summer Jobs—Farm
(46) Safety in the Woodshop
(47) School Fires
(48) Unauthorized Play Spaces
(49) Bathroom Hazards

Data Sheets from Safety Education are available for a small fee from the National Safety Council, 425 N. Michigan Avenue, Chicago 11, Ill.

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NSC Services

(Continued from page 4)

physical sciences, business personnel administration, colleges of medicine or university hospitals, street and highway transportation, transportation, traffic engineering, civil engineering, public administration, agriculture, community colleges, student safety councils, student councils, college radio stations and college newspapers. In less than a month almost 100 of these blue request for information sheets had been received by the National Safety Council, which indicates that there is a real interest in safety and safety materials on the part of the higher institutions.

The plan is explained in Service Guide 1.8, "Safety Information Services for Colleges and Universities." Recommended selections are listed for the various units within a higher institution. For example, for schools, colleges or departments of teacher education, three suggestions are given: 1) the Safety Education Periodical service, $8.00, which includes SAFETY EDUCATION magazine; PUBLIC SAFETY magazine; Safety Exchange newsletter; Safety Beacon newsletter; Safety Scope newsletter; Safety Sentinel newsletter; Student Safety Organization newsletter; School Shop newsletter; Accident Facts; Congress Transactions, School Sessions; National Directory of Safety Films; Safety Education Memos; and enrollment in Higher Education committee plus enrollment in the Driver Education section or Elementary School or Secondary School committee; 2) Safety Education Reference service, $9.00; and 3) the School Shop service, $7.00.

Equally well worked out selections are made for schools, colleges, or departments of home economics, engineering, physical sciences, business personnel administration, physics; schools or colleges of medicine or university hospitals; departments of street and highway transportation or transportation; schools or departments of traffic engineers, civil engineering or public administration, for schools, colleges or departments of agriculture, and for community colleges, student safety councils, student councils, college radio stations, and college newspapers.

Unfortunately, too few higher institutions have availed themselves of the privileges provided by this new service. One hundred forty-three of the information blanks had been returned by August in response to the letter sent out March 22, 1950. The areas of interest checked were:

Teacher Education	92
College Newspapers	2
College of Agriculture	1
Dept. of Home Economics	1
Engineering College	1
No area specified	46
	143

It seems now that our immediate task is to bring this information to the attention of department heads who should know of this excellent contribution the National Safety Council is making in the area of higher education.

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There's Safety in Color

(Continued from page 22)

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Safety in College Domitories

(Continued from page 3)

O.K.	Needs Attention	
____	____	4. Do all doors open outward?
____	____	5. Are doors hung so that they will not block traffic when open?
____	____	6. Are there panic bolts where needed?
____	____	7. Do all gas heaters have pilot light and safety valve?
____	____	8. Are all gas stoves or appliances vented?
____	____	9. Are there fire doors on furnace rooms?

B. Conditions of Temporary Nature:

____	____	1. Give date of last recharging of fire extinguishers.
____	____	2. Are fire extinguishers demonstrated or explained?
____	____	3. Is the emergency alarm system in operating condition?
____	____	4. Are the names and telephone numbers of those to be called in case of emergency posted near the telephones?
____	____	5. Has an evacuation diagram been posted and an alternate plan been provided if escape is cut off?
____	____	6. Are fire drills held systematically?
____	____	7. Are outside fire escapes in safe condition?
____	____	8. Is there a regulation against smoking in bed?
____	____	9. Do students throw cigarettes on floor?
____	____	10. Are ash trays provided in adequate number and size?
____	____	11. Are nonflammable decorations always used for special events?
____	____	12. Are rubbish and waste promptly and safely disposed?
____	____	13. Are wastepaper baskets metal?
____	____	14. Are oil mops, rags, etc., stored in noncombustible containers?
____	____	15. Are all gas burners shut off after use?

Miscellaneous

____	____	1. Are bathroom and kitchenette fixtures safe?
____	____	2. Do bathrooms have outside vents?
____	____	3. Are laundry facilities safe?
____	____	4. Are safety valves installed where needed to prevent explosion?
____	____	5. Is safe ventilation provided?
____	____	6. Are there objects which might fall from window sills, shelves, etc.?
____	____	7. Is there any loose plaster or tile?
____	____	8. Is furniture free of splinters and weak parts?
____	____	9. Are students regularly advised concerning safety?

for

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Send for new circular of Sam Browne Belts, Arm Bands, Badges, Safety and School Buttons.

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TRADE PUBLICATIONS

The following publications are intended for the guidance of those responsible for the purchase of equipment to promote safety in the school. The coupon below will bring FREE to responsible school personnel any or all of those listed.

1. **"Dental Health Education Material"**: Illustrated booklet on dental health education aids. Included are dental health program manuals, booklets on the care of teeth, professional materials, educational film and slide film service, and library aids. Other miscellaneous materials. American Dental Association.

2. **Slide and Filmstrip Projectors**: Five new visual education slide and filmstrip projectors are described by the text and photographs of this pamphlet. Operating features, and price list of projectors and accessories included. Society for Visual Education, Inc.

3. **School Equipment Catalog**: Catalog with illustrations of all kinds of school equipment and supplies. Classroom equipment, office furniture, playground equipment, visual education equipment, maintenance supplies, office and classroom supplies, art and handicraft material, and teaching material included. Beckley-Cardy Co.

4. **Ford School Bus Chassis**: Descriptive literature on safety school bus chassis built to meet safety requirements of the National Education Association. Specifications on 24 to 48 passenger buses included. Ford Motor Co.

5. **Fire Exit Latches**: A catalog with diagrams and illustrations explaining features of all types of panic and fire exit latches. Vonnegut Hardware Co.

6. **"Over-all Lighting"**: Illustrated booklet on advantages of "Over-all Lighting," a service based on complete line of lighting units for any type building. F. W. Wakefield Brass Co.

7. **Safety Patrol Equipment**: Illustrated "open letter" to safety patrol directors includes complete information on uniform equipment—badges, Sam Browne belts, caps, raincoats, and other items of uniform equipment. Graubard's.

SAFETY EDUCATION JANUARY, 1951

425 North Michigan Avenue, Chicago 11, Ill.

Please have sent to me the publications checked

1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐

Name .....

Title .....

School .....

Address .....

City .....

Everybody Out!

(Continued from page 12)

can be corrected and improved. Representatives of the Minneapolis Fire department, with members of the school committee, witness and time each drill.

The signal for fire evacuation is given by a school official on a different day and hour at least once each school month in accordance with local school fire drill regulations. The fire evacuation signal can be momentarily interrupted to give spoken directions regarding fire location or emergency conditions over the public address system from the central telephone switchboard. The switchboard operator and one school official remain at the office switchboard during the drills to handle simulated emergency conditions.

All-Clear Signals

All-clear signals located on the outside of the building are sounded by controls from the office switchboard before students and employees are permitted to re-enter building.

On the first Monday of each four-week training period, each instructor is required to review the fire drill procedures with every class met. A floor plan for each of the three floors with an overlay of red lines and arrows illustrates all routes through hallways and stairways, according to letter identification and exit numerical marking. Printed procedures and regulations which must be observed are in the hands of all instructional staff and other employees. These are likewise posted on all school and departmental bulletin boards. Frequent reference is made to fire drill importance in official memorandum and the school paper.

In Readiness

Besides being in readiness to evacuate in case of fire, the frequent reference to the posted signs and printed material serves to keep all students and employees safety-conscious and fire-prevention minded.

Fire and disaster strikes without warning. Constant preparedness is the best assurance and insurance to safeguard life and property. The first duty is to provide adequately for the safety of the students and employees. No responsible school administration can overlook this obligation to the people occupying its buildings. This program should be planned in great detail to guarantee success.

"The bonds I bought for our country's defense —will see my twins through college!"

HOW U. S. SAVINGS BONDS ARE PAYING OFF FOR MRS. MARY CALLON OF INDIANAPOLIS, INDIANA

"*Janet and Jack* are my twin reasons for buying bonds," says Mary Callon. "I've been a widow since they were 8 but since 1942 I've been buying bonds for their college education—as well as for defense. By setting aside 10% of each week's pay through the Payroll Savings Plan where I work, I've saved the money. So it's Butler University for my twins this fall—thanks to my United States Savings Bonds!"

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You'll be providing security not only for yourself and your family but for the free way of life that's so important to us all. And in far less time than you think, your plans will turn into reality, just as Mary Callon's are doing.

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